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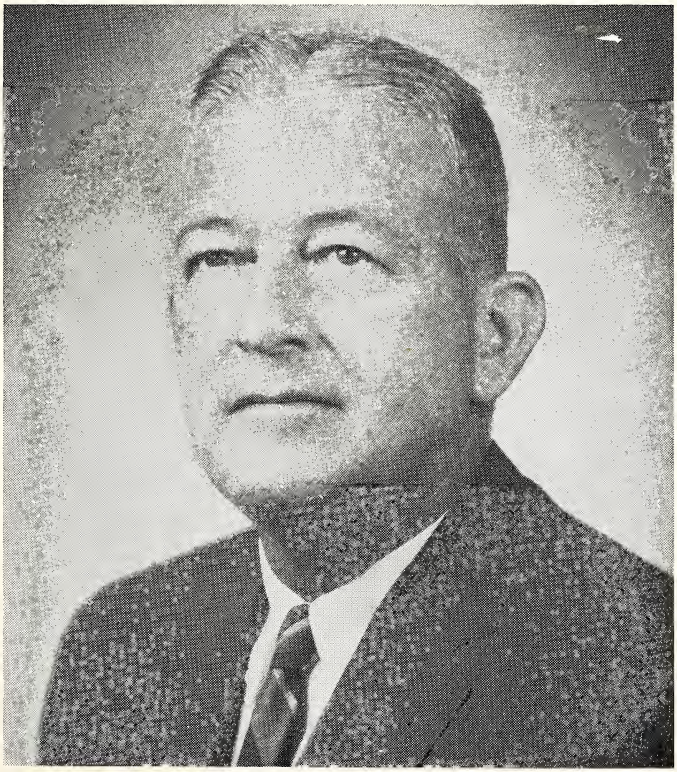
THE SUGAR BULLETIN

Vol. 48—No. 1 OCTOBER 1, 1969

...cial Bulletin of the American Sugar Cane League of the U. S. A.



THOMAS H. ALLEN
Twenty-Fifth President of the American Sugar Cane League

PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH
IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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UP FRONT WITH THE LEAGUE

By A. W. Dykers

The Annual Meeting

The Annual Meeting of the American Sugar Cane League was held September 25th, as per schedule in the Grand Ball Room of the Fontainebleau Motor Hotel, New Orleans, beginning at 1:30 P. M. It was the forty-seventh annual meeting of this organization and people from all over the Louisiana sugar belt were in attendance.

The meeting was a continuation of a luncheon that the Louisiana State University Extension Service and the American Sugar Cane League sponsor each year to honor cane farmers throughout the State who have produced more sugar cane per acre than anyone else in their respective district and acreage groups.

By way of explanation, for the awards contest the sugar belt is divided into five districts and each district is divided into six acreage groups. Acreage group number 1 consists of farms of 5 to 49.9 acres. Farms of 50 to 99.9 acres comprise group number 2. Group number 3 is 100 to 199.9 acres and group number four, 200 to 499.9 acres. Group number 5 consists of 500 to 999.9 acres, and group number 6 embrases all farms of 1,000 acres or more planted to cane.

Award Winners

Winning an award isn't the easiest thing in the world because, just to qualify for consideration, a farm must produce 20% more cane per acre than the district average. For instance, the average production in District 1, consisting of Vermilion, Lafayette and St. Martin Parishes, was 27.37 tons of cane per acre for the 1968 crop. This means that to get into the contest in District 1, a farmer had to produce at least 32.84 standard tons of cane per acre. The winners in District 1 were as follows:

Group 1—Ray Sam, 33.1 tons of cane per acre on 31.8 acres.

Group 2—Allen Laperouse, 36.1 tons of cane per acre on 65.4 acres.

Group 3—Clet Lesseigne, 36.5 tons of cane per acre on 162.2 acres.

Group 4—Laperouse Brothers, 38.0 tons of cane per acre on 268.1 acres.

In groups 5 and 6 of District 1, no

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IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

Sucrose Good

Cool temperature and the lack of rainfall during the last half of September have materially retarded growth and these same conditions have greatly stimulated the formation of sucrose in cane.

A number of factories have begun taking samples and all reports received show L 60-25 either par or very near par. Sucrose in C.P. 48-103 is, in many instances, equal to L 60-25 and is generally good everywhere the variety is grown. With the exception of C.P. 44-101, the reports on sucrose have been good from all parts of the belt.

As indicated earlier, the cool and dry weather during the latter part of September slowed the growth of cane. Where cane was already tall, this weather condition does not appear to have done any great amount of harm but in areas where cane was already short from drought, the September drought certainly seems to have done damage. Cane is very short in these sections and both high trash and low sucrose could become a problem. However, from observations, there is not much cane that can't be properly topped because of the inability of the topper to be lower. Most short cane will be able to be properly topped if attention is paid to the job.

Planting

The planting operation has been somewhat slow this year. The dry condition of the soil caused many growers to delay or slow down the planting operation. However, for a good part of the belt rain did not come and many acres were planted in dry soil. This could become a problem in heavy soil if rainfall does not come soon. In general, the quality of the planting work was good. More growers each year have learned that cane does not have to be buried 6 or more inches in soil to survive the winter. This practice, together with better drainage, has contributed materially to the increased yields over the last few years. A much better job of planting is being done today than during the 1950's. Power on the farm has been a great help in this job and in doing all type work on the farm.

Growers planted a large percentage of the crop to the two varieties, L. 60-25 and C.P. 61-37. Strangely enough, there were not too many complaints about brittleness of either variety at planting times. Growers continue to tell the researchers that cane loses brittleness several years after the variety has been released. It is hoped they are correct.

Several mill operators have indicated a later than usual starting date for the beginning of grinding because of the 15 per cent reduction in acreage of the crop. However, reports indicate that Smithfield Factory in West Baton Rouge Parish may begin grinding operations on October 7. Smithfield started grinding operations very early last year with excellent sucrose, and sucrose appears good in the area now.

Growers are reminded that stale cane is bad for both grower and processor. Growers should try to keep close check on cutting and hauling. Mill operators should also watch mill yard stacks. Old cane on a stack can hurt. Old cane there can slow down operations and make stale cane in the field. The problem can snowball.

IN WASHINGTON WITH FERRIS & GODFREY

By Josiah Ferris and Horace Godfrey

General Accounting Office Report

The General Accounting Office, watchdog agency for reporting directly to Congress, filed a report to Congress on September 23, on the administration of sugar marketing quotas established by the Sugar Act of 1948. The report states that:

"The General Accounting Office (GAO) undertook this review to determine why domestic sugar producers were not marketing the amount of sugar authorized by the act, since it appeared that substantial benefits, including a beneficial effect on the U. S. balance-of-payments position, were available if domestic sugar producers marketed sugar to the extent of their authorized quotas."

Under FINDINGS AND CONCLUSIONS, the report states:

"GAO's review showed that the substantial deficits in annual domestic sugar marketings developed because continuing, long-term deficits had occurred in two domestic sugar-producing areas—Puerto Rico and the Virgin Islands.

"GAO's review indicated that other domestic areas could provide for the unfilled Puerto Rican and Virgin Island quotas and that significant benefits could be achieved by providing for the allocation of continuing, long-term marketing deficits of a domestic area to other domestic areas rather than to foreign countries. The benefits which could be achieved include a substantial increase in the gross income of domestic sugar producers and a reduction in dollar outflow for sugar imports.

"GAO estimated that, had the 1968 Puerto Rican and Virgin Islands deficits been allocated to the domestic sugarcane and sugar beet areas in proportion to their 1968 marketing quotas, domestic producers could have realized additional gross income of about $62 million and that the 1968 outflow of dollars for sugar imports could have been reduced by about $89 million. The net effect on the U. S. balance-of-payments position which would result from the revised allocation of the deficits was not estimated by GAO.

"GAO has not made an assessment of the implications for sugar prices or the effect on distribution patterns between beet and cane sugar which a shift of unused quotas to domestic production would have within the United States. Obviously careful consideration should be given to these factors before revising the present legislative formulas for any purpose of increasing domestic quotas; nevertheless, GAO believes that the continuing severity of the U. S. balance-of-payments situation should be a major consideration in allocating continuing, long-term deficits."

The report continues as follows:

"The Secretary of Agriculture agreed with GAO's findings and stated that it was the view of the Department that, when sugar legislation is next considered by the Congress, consideration should be given to enabling the domestic areas to market a substantially larger proportion of national requirements than possible at present. The Secretary stated also that, when developing an Administration position on sugar legislation, the Department would consult on this matter with other agencies within the executive branch.

"In view of the significant benefits which would accrue to the domestic sugar industry and the beneficial effect on the U. S. balance-of-payments position through a reduction in the outflow of dollars, GAO recommends that the Congress in its extension of the legisla—which expires on December 31, 1971—consider modification of the deficit allocation provisions of the

(Continued on page 13)

ADDRESS OF J. MALCOLM DUHE AT THE ANNUAL MEETING OF THE AMERICAN SUGAR CANE LEAGUE

Members of the American Sugar Cane League and our distinguished guests.

This is the second year that it has been my privilege to report to you as President of the American Sugar Cane League and, as I complete my second term in office, I want to again assure you that it has been a high honor to have been chosen to head this organization during the two years which we are now completing.

Last year I began my talk by congratulating the High Yield Award Winners and again, today, I want to extend the official congratulation of the American Sugar Cane League to these farmers for their outstanding accomplishments. Their success has pointed the way year after year to increased cane tonnage and sugar yields per acre.

The records show that the average yield of cane per acre in 1968 was 26.06 tons. Ten years ago the 1958 crop average 22.20 tons of cane per acre and twenty years ago the 1948 crop averaged 19.19 tons of cane per acre. This is a substantial increase in tons of cane per acre during the past twenty years, but the production of sugar per acre seems to me to be even more outstanding.

In 1948 the average production of sugar per acre on Louisiana sugar cane farms was 3,091 pounds, whereas the average production of sugar per acre for the 1968 crop was 4,801 pounds. This is an increase of 1,710 pounds of sugar per acre and an increase in dollars and cents per acre, using the average price of a pound of sugar for the 1968 crop, of $130.99. For the State this is a total of almost 37 million dollars additional income to growers and processors.

There are many reasons for the steady improvement in our cane and sugar production but, by far the most important, has been the favorable response that most of the Louisiana cane farmers have shown to suggestions by the scientists and the county agents. The reports we have heard today show that the High Yield Award Winners have readily accepted the changes recommended by the U.S.D.A. and L.S.U. people. High Yield Award Winners are the pioneers who show the way to bigger and better cane production. They continue to demonstrate to us that it is possible to produce considerably more cane per acre in Louisiana than most of us do. Again I congratulate them.

While on the subject of cane production, the Louisiana sugar cane farmers are receiving a new sugar cane for commercial planting this year. In the varietal program, literally hundreds of thousands of new cane seedlings are tested each year by the U.S.D.A. and L.S.U. sugar experiment stations. The records show that at the Houma Station alone 1,081,249 sugar cane seedlings have been potted for testing during the past five years. The scientists at L.S.U. have also put hundreds of thousands of seedlings in pots during the same period of time. Occasionally, from these seedlings, there will emerge a cane of superior quality which, after undergoing perhaps ten years of testing, will be released through the American Sugar Cane League to the Louisiana cane growers for commercial planting.

It is significant to note that during the past ten years five new cane varieties have been considered good enough to be released. The latest of these is L 62-96, a product of a cross made by the Louisiana Agricultural Experiment Station, which is now being distributed by the American Sugar Cane League. Lloyd L. Lauden, the League's Agronomist, reports that approximately 1,000 farms have applied for the approximately 3,000 tons of

this cane available for distribution.

* * *

Turning to our quota and acreage problem, we won a victory this year when, on August 21st, the U.S.D.A. announced an increase in cane acreage for 1970 of 11.8 per cent for the Mainland Cane Sugar Area, which is Louisiana and Florida. The increase was granted after a very long fight during which we were again opposed by other segments of the Domestic Sugar Industry spearheaded by the newly appointed Washington Representative of the Hawaiian Sugar Planters' Association, Mr. John C. Bagwell, and Mr. Irvin A. Hoff, President of the Cane Sugar Refiners' Association. This opposition is a development which was uncalled for and which we deeply regret.

The acreage increase is not a sugar marketing quota increase. The Mainland Cane Sugar Area cannot sell a pound more of sugar now than it could before the acreage order. Actually, the acreage increase will place an added burden on the Louisiana and Florida mills as they will have to carry over practically all the sugar produced from the enlarged 1970 crop acreage into the following year. The acreage increase may keep some "borderline" farmers and mills from going out of business.

The fight to obtain more marketing quota for Mainland Cane will resume in earnest in the very near future. The Sugar Act does not expire until December 31,1871. However, I believe there is a fair chance that the Sugar Act will be amended in 1970.

* * *

Most of you, I am sure, have noticed the weekly reports by our Economist, Glenn R. Timmons, that have been carried by newspapers throughout the sugar belt. These are the result of a decision by the Public Relations Committee of the League, headed by M. V. Yarbrough, to keep the public of Louisiana informed on matters concerning sugar. The reports have met with a very favorable reception and Mr. Timmons is to be congratulated for his good work.

Another inovation this year has been the League's quarterly report. This is in the form of a letter to our members outlining the League's activities during the quarter under review. This, too, was stimulated by the League's Public Relations Committee.

* * *

Labor relations have consumed more than their share of time since my last report. P. J. de Gravelles, Jr., is Chairman of the League's Labor Relations Committee and has had his hands full keeping up with labor problems which have resulted largely from interference by outside agitators. Early in the year we joined with the National Labor Relations Board in opposing a suit brought by Local 300 of the Amalgamated Meat Cutlers and Butcher Workmen of North America in which the Union contested a ruling by the Board that farm tractor drivers were farm laborers and, as such, were not covered by the National Labor Relations Act. Assisted by Paul Borron, Jr., the League's able attorney, Local 300's suit was dismissed by U. S. Judge Mitchell. The Union, however, promptly appealed, and the matter is now before the U. S. Fifth Circuit Court of Appeals and could go all the way to the Supreme Court.

* * *

There have been, of course, many other problems that have confronted the industry during the past twelve months. Two of these of great public interest are highway safety and air pollution. The American Sugar Cane League established committees on these two subjects. Cane haulers have been especially urged to properly load and properly drive all cane vehicles that use public roads. We included our highway safety recommendations in our second quarterly report and again in the September 15th, issue of The Sugar Bulletin.

Safety on our highways is everybody's business. Stream and air pollution is everbody's business, too. The Louisiana sugar industry must continue and intensify its efforts to minimize water and air pollution caused by our industry.

(Continued on next page)

ADDRESS

Two members of the League's Executive Committee died during the year under review. Roland L. Toups passed away on Friday, May 9th, and a little over a month later, on June 30th, Nicholas Bergeron was also taken from us. These two men were leaders who will not be easily replaced.

* * *

As usual, the staff of the American Sugar Cane League, headed by our general manager, Gilbert Durbin, has performed nobly throughout the year, and its members have been a pleasure to work with. I thank each of them for their cooperation during my two terms in office.

Horace Godfrey, former National Administrator of the Agricultural Stabilization and Conservation Service, became a League employee last March. He was selected to succeed Josiah Ferris as representative of the American Sugar Cane League and the Florida Sugar Cane League in the Nation's Capitol. By the end of the year, Joe will have completed the job of turning over to Horace all the duties of the Washington office of the two leagues, after almost two decades of sterling service to the Mainland Cane Sugar Industry.

Again, may I say that it has been an honor to serve as President of the American Sugar Cane League. Your help and encouragement has been greatly appreciated and if my successor enjoys the same consideration and cooperation that has been shown me by each and everyone of you, he will, on the last Thursday in September 1971, stand before you, as I do today, counting his blessings.

Thank you very much.

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   Condition Good—Baton Rouge, La.
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   Condition Good—Baton Rouge, La.
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   Condition Good—Baton Rouge, La.
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   Condition Good—Baton Rouge, La.
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   Condition Fair—Baton Rouge, La.

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DURATION OF FREEZING: THE EFFECT ON FIELD CANE

J. E. Irvine[1]

Freeze effects on sugarcane varieties, for both moderate (1, 2, 3, 4) and severe (5, 6, 7) freezes, have been reported. The primary difference between freezes in Louisiana has been their intensity, or the lowest temperature reached.

However, Louisiana growers have felt that the length of the freezing period might be as important as the minimum temperature. A hard freeze could be devastating, but a long light freeze might also be serious. Unreported experiments at the Houma Station showed 4 hours at 21°F to be sufficient to completely freeze mill cane. However, 48 hours at 31°F achieved the same effect.

December freezes of 25°F occurred at Houma during the harvest seasons of 1967 and 1968. These freezes permitted a unique field comparison of cane affected by the same minimum temperature but for different durations. The 1967 freeze lasted for 6 hours, while the 1968 freeze lasted for 11 hours. Neither freeze was complicated by a later, more intense freeze. Many of the same varieties occurred in the two successive cold tolerance tests in adjacent fields in both years.

On the morning of December 24, 1967, the temperature reached a low of 25°F in the experimental area. The temperature was below freezing for 6 hours. A second freeze occurred on January 14, 1968, with another low of 25°F. No lower temperatures occurred during the test period (December 24, 1967 to February 7, 1968).

On the morning of December 16, 1968, the temperature again reached a low of 25°F, with a total of 11 hours of sub-freezing temperature. Two hours were below 28°F. On January 6, 26°F. was recorded, and no further freezing occurred during the 43-day test period.

One 20 stalk sample was taken from each of two replicates of 10 varieties on each sampling date in each year. In 1967, samples were harvested on 4 dates: 3, 22, 30, and 45 days after the initial freeze. In 1968, samples were harvested on 7 dates: 1, 8, 15, 21, 28, 35, and 43 days after the initial freeze. Stalks were topped at the last hard

Table 1. Changes in juice quality of sugarcane frozen at 25°F, December 24, 1967.

Variety	Days after 25° Freeze	Surcose %	Purity %
C.P. 47-193	3	15.20	86.43
	22	15.71	87.76
	30	14.44	86.36
	45	15.97	89.36
C.P. 52-68	3	15.21	85.83
	22	15.33	85.64
	30	14.54	84.74
	45	16.25	89.18
C.P. 55-30	3	14.73	84.26
	22	14.92	84.38
	30	14.21	83.29
	45	15.23	87.17
C.P. 60-16	3	14.90	84.26
	22	15.33	88.20
	30	13.59	86.06
	45	16.01	90.86
C.P. 61-37	3	14.90	88.00
	22	16.43	89.87
	30	14.38	86.94
	45	15.83	90.87
C.P. 62-258	3	14.30	84.66
	22	15.15	85.83
	30	14.50	83.66
	45	15.84	87.00
L. 60-25	3	15.46	87.74
	22	16.06	88.98
	30	15.36	88.02
	45	15.31	87.53
L. 61-67	3	15.44	88.32
	22	15.60	86.04
	30	14.51	84.21
	45	14.33	84.79
L. 62-96	3	16.21	88.72
	22	17.58	88.74
	30	16.26	88.27
	45	17.47	91.46
N.Co. 310	3	13.29	82.39
	22	14.87	86.05
	30	12.92	81.05
	45	16.36	89.89

[1]Plant Physicologist, U.S. Sugarcane Field Station, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana.

able 2. Change in juice quality of sugarcane frozen at 25°F, December 16, 1968.

Variety	Days after freezing	Crusher Juice Analysis: Sucrose %	Purity %	Acidity Ml/NaOH/10 ml	Frozen tissue %
.P. 47-193	1	14.73	82.66	3.23	
	8	15.35	84.29	3.16	
	15	14.24	84.06	3.11	
	21	15.20	84.21	3.80	
	28	14.79	84.37	3.33	
	35	14.44	84.64	3.61	
	43	14.44	83.95	3.68	38.5
.P. 52-68	1	14.28	81.97	3.18	
	8	13.30	80.17	2.89	
	15	14.29	83.47	2.90	
	21	14.76	83.30	3.46	
	28	12.90	78.95	3.92	
	35	13.30	80.51	3.32	
	43	13.04	80.39	3.19	37.5
.P. 55-30	1	15.33	81.89	3.00	
	8	15.26	82.40	2.28	
	15	14.66	82.08	3.18	
	21	14.70	81.21	2.76	
	28	14.14	80.66	2.56	
	35	13.91	81.34	3.06	
	43	13.54	80.59	2.47	49.5
.P. 61-37	1	14.92	85.26	2.64	
	8	14.92	85.75	2.36	
	15	14.80	86.25	2.26	
	21	15.32	86.65	2.67	
	28	15.62	87.85	2.34	
	35	15.33	87.40	2.41	
	43	15.40	88.15	2.49	6.6
.P. 62-258	1	14.60	80.98	2.62	
	8	14.73	81.70	2.30	
	15	13.86	82.21	3.40	
	21	13.75	79.52	3.51	
	28	12.98	78.48	3.89	
	35	13.18	78.97	4.16	
	43	12.75	77.74	4.53	60.2
.P. 62-286	1	15.22	85.95	3.01	
	8	15.17	86.39	2.42	
	15	14.72	87.41	1.89	
	21	15.35	87.46	2.94	
	28	14.14	85.49	2.86	
	35	13.12	84.54	3.08	
	43	13.62	85.39	3.39	34.8
. 60-25	1	15.91	87.32	3.01	
	8	15.76	87.07	2.56	
	15	16.12	88.86	4.07	
	21	16.48	88.22	3.11	
	28	16.42	88.61	2.58	
	35	16.74	89.18	2.70	
	43	15.46	87.24	2.86	18.1
. 62-86	1	14.53	84.28	2.81	
	8	14.79	84.61	2.41	
	15	13.84	84.85	2.58	
	21	14.51	83.78	3.14	
	28	13.03	80.33	3.47	
	35	11.88	77.34	4.97	
	43	10.82	69.80	7.17	66.5
L. 62-96	1	15.87	85.69	2.67	
	8	17.01	88.82	2.38	
	15	15.86	87.33	2.75	
	21	16.51	86.58	3.26	
	28	16.28	86.69	3.21	
	35	15.00	85.57	3.19	
	43	15.78	85.90	3.54	16.6
N.Co. 310	1	13.63	79.52	2.95	
	8	13.12	78.28	2.15	
	15	13.86	82.55	2.27	
	21	14.44	81.26	3.76	
	28	11.68	75.74	3.50	
	35	13.49	82.26	3.21	
	43	12.40	77.88	3.26	31.1[1]

[1]Cane of N.Co. 310 was badly lodged.

internode and milled without burning.

Following the 6-hour freeze in 1967, no significant changes were observed in stalk weight, juice acidity, or juice gum content. There was a slight significant ($P = 0.05$) increase in sucrose and purity during the test period (Table 1). The only varieties not showing improvement were L. 60-25 and L. 61-67. The general improvement can be attributed to the survival of approximately 30% of the green leaf tissue. Stalk tissue damage was limited to the terminal bud and the very small internodes, which were removed by normal topping.

Following the 11-hour freeze in 1968, there were no significant changes in stalk weight or juice gum content. There were significant differences in the amount of frozen stalk tissue in the different varieties. Samples taken on December 31, 1968 (15 days) were wet and the lower sucrose is probably a reflection of the high water content of the trash. Only C.P. 61-37 had a thin band of green leaf tissue remaining in the tops. This variety had the least amount of frozen stalk tissue; it showed a significant improvement in sucrose and purity, and no change in titratable acidity. The usual standard of excellence in cold tolerance, N.Co. 310, did not perform as expected.

(Continued on next page)

DURATION

However, it was badly lodged before the freeze and probably experienced lower temperatures than more erect varieties. Almost one-third of the stalk was frozen. There was a slight drop in sucrose and purity and a slight increase in acidity. Those varieties with the most deterioration were two candidates for release in 1969. These varieties C.P. 62-258 and L. 62-86 reached salvage about a month after the initial freeze. Drops in sucrose and purity were accompanied by rapid rises in acidity (Table 2).

A comparison of these two freezes shows a marked difference. Even though the minimum temperature was the same, a general improvement in cane quality occurred following the short freeze. Only one variety in 10 improved following the longer freeze, and two would have been unacceptable at the mill. The differences between these two tests, in all probability, can be attributed to the longer freezing time in 1968.

These data emphasize the importance of field observations following a freeze. Minimum temperatures can be used as an indicator of possible damage, but surveys of different fields for damage are the best guide. Stalks should be cut from edges and interiors of fields and then split from end to end. The amount of water-soaked tissue reflects the damage done by the freeze.

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UP FRONT

(Continued from page 3)

farm produced more than 32.84 tons of cane per acre and, consequently, there were no winners in these two groups.

In District II, composed of Iberia and St. Mary Parishes, 20% above the district average was 36.49 tons of cane per acre. The winners were:

Group 1—Robert Judice, 46.83 tons of cane per acre on 40.4 acres.

Group 2—M. J. Foster and W. P. Foster III, 39.49 tons per acre on 62.6 acres.

Group 3—Nicholas Paul and Son, 41.98 tons per acre on 123.9 acres.

Group 4—Louis Comeaux, 43.71 tons per acre on 344.2 acres.

Group 5—Ronald Hebert, 42.4 tons per acre on 500.6 acres.

Group 6—A. V. Allain and Sons, 36.73 tons per acre on 1,156.7 acres.

The Parishes of Assumption, Lafourche, and Terrebonne constitute District III. The average yield of cane per acre in these three parishes last year was 28.86 tons. Twenty per cent above this average is 34.63 tons per acre. The winners in District III were:

Group 1—Richard Boudreaux, 44.8 tons of cane per acre on 12.1 acres.

Group 2—Leroy and Paul Zeringue, 41.0 tons of cane per acre on 74.0 acres.

Group 3—Camille Naquin, 40.9 tons of cane per acre on 153.5 acres.

Group 4—Benson Thibodaux, 42.62 tons of cane per acre on 200.6 acres.

Group 5—Dugas & LeBlanc, 37.0 tons of cane per acre on 604.4 acres.

Group 6—Estate of C. J. Arcement, 34.3 tons of cane per acre on 1,068.7 acres.

District IV is Ascension, Iberville, St. Charles, St. John, St. James, and West Baton Rouge Parishes. Twenty per cent above the average yield in these six parishes was 34.8 tons per acre. The winners here were:

Group 1—Joseph D. Wilbert and L.

P FRONT

andry, 42.5 tons of cane per acre on 5.5 acres.

Group 2—Eddie Falgoust, 42.5 ons of cane per acre on 98.4 acres.

Group 3—Alvin B. Daigle, 40.9 ons of cane per acre on 133.1 acres.

Group 4—Fernand Falgoust, 39.7 ons of cane per acre on 432.4 acres.

Group 5—Everett Caballero, 38.5 ons of cane per acre on 594.9 acres.

Group 6—Poplar Grove Planting nd Refining Co., 37.8 tons per acre n 1,626.9 acres.

District V is composed of Avoyelles, ointe Coupee, Rapides, and West eliciana Parishes. The average yield this district was 27.74 tons of cane er acre and to qualify for an award a arm had to produce at least 33.28 ons of cane per acre. The winners in istrict V were:

Group 1—Joseph Chrutz, 41.5 tons f cane per acre on 27.6 acres.

Group 2—Felton Bizette, 43.0 tons f cane on 73.0 acres.

Group 3—E. L. Lyles, 35.2 tons of ane per acre on 131.2 acres.

Group 4—H. K. Bubenzer Farms, nc., 33.68 tons of cane per acre on 24.0 acres.

No farm produced more than 33.28 ons of cane per acre in groups 5 and 6 nd there were no winners in district V n these two groups.

Elections

Members of the Executive Committee of the League are elected by the membership at the Annual Meeting and the officers are elected by the new Executive Committee at a meeting immediately following the Annual Meeting.

Barring unforseen developments, the op officers of the League are changed very two years, and this was the year or a change. Elected President to succeed J. Malcolm Duhe was Thomas H. Allen, of Franklin, La. Ed. Schexayder, of White Castle, retained his lace as 1st Vice-President.

P. L. Billeaud, of Broussard, is the ew 2nd Vice-President of the League.

James H. Thibaut, of Donaldsonille,, is the new 3rd Vice-President of he League.

Horace D. Godfrey is the new 4th Vice President of the League.

Gilbert J. Durbin, of New Orleans, was re-elected 5th Vice-President and General Manager.

Warren J. Harang, Jr., of Thibodaux, was re-elected Treasurer, and F. A. Graugnard, Jr., of St. James, was re-elected Secretary to complete the roster of League officers.

Twenty-nine people were elected members of the new active Executive Committee of the League and five Honorary Members were also chosen. Please refer to the mast-head of this issue for the names of the Executive Committee members.

Joe Ferris Honored

Josiah Ferris, who has managed the Washington affairs of the American Sugar Cane League for the past seventeen years, was an honored guest at the Annual Meeting. He and Mrs. Ferris were especially invited to attend the meeting so that Joe might receive a token of esteem from the Executive Committee of the American Sugar Cane League.

Joe has retired after almost two decades as the 4th Vice-President and Manager of the Washington Office of the American Sugar Cane League. Horace Godfrey, former National Administrator of the Agricultural Stabilization and Conservation Service has succeeded him in the Washington scramble.

The Old Mule

Just for the record, that bat over the head we suggested for The Old Mule seems to have brought him back to his senses. Since receiving the therapeutic swat on the noggin, our market character has braced up considerably and at 7.85 is now at least within hailing distance of the 7.91 target price prevailing at this writing. Let's hope he keeps up the good work.

IN WASHINGTON

(Continued from page 5)

Sugar Act of 1948, as amended, to enable the Secretary of Agriculture to allocate continuing, long-term deficits of a domestic area to other domestic areas rather than to foreign countries."

SPEECH BY WILLIAM S. CHADWICK, ON BEHALF OF THE LOUISIANA SUGAR INDUSTRY, AT THE SECRETARY OF AGRICULTURE'S HEARING ON AGRICULTURE AND THE RURAL ECONOMY, COLLEGE STATION, TEXAS, SEPTEMBER 18, 1969

Mr. Secretary, my name is William S. Chadwick, President of Southdown, Inc., and Chairman of the Legislative Committee of the American Sugar Cane League. Southdown, Inc. is a grower and processor of sugar cane in Louisiana. The American Sugar Cane League is an organization representing substantially all of the sugar cane producers and processors in that state. First, Mr. Secretary, let me express my appreciation and the appreciation of all the growers and processors for your recent announcement with respect to the 1970 Proportionate Share Acreage for domestic sugar cane growers. We are grateful for the Determination made by you that returns for 1970 a portion of the acreage which we were required to reduce in 1969. The importance of the Sugar Program to the State of Louisiana cannot be overemphasized. It has been said that the Sugar Program is a "way of life" to the area of the State where sugar cane is grown and processed but I say that it is not a way of life but **"life itself"** to the growers who grow the cane and to those individuals who work in the fields and mills.

The growing and processing of cane is a big industry for the State and has a tremendous effect on the economy of the entire State. Sugar cane accounts for about 20% of the total cash income from all crops in Louisiana. The cane is processed by 44 factories, all located within the State. The value of the 1968 crop at the first processing level was $116,000,000 dollars. Most of this money was "plowed" right back into the economy to make and process another crop.

Mr. Secretary, this information is cited as background and is possibly already known to you but I want to make the point that even though sugar cane is presently grown and processed in only two states on the Mainland, it is nevertheless an important agricultural commodity to the economy. Above all sugar is an important commodity to the people of the United States.

The history of the sugar program goes back to the Jones-Costigan Act of 1934 and the Sugar Act of 1937 and subsequent Acts and amendments. It is our belief that the goals of the Sugar Act have in the most part been met. We believe that it is necessary to restate these goals from time to time in order that we do not lose sight of the benefits derived from this important legislation. These goals are simply to protect the welfare of consumers of sugar and of those engaged in the domestic sugar producing industry by providing a supply of sugar at prices which are not excessive to consumers and will fairly and equitably maintain the sugar industry. In addition, the Sugar Act has the further purpose of promoting the export trade of the United States.

I stated that it was our belief that the goals of the Sugar Act have in the most part been met. This is confirmed when you study the facts. First consider the welfare of consumers. The Act has provided adequate supplies of sugar and at reasonable prices. Recent figures indicate that while the cost of consumer items has advanced 20% since 1959, the cost of refined sugar (average for 12 months, 1968) to consumers has increased only 6.6%. Next consider the welfare of those workers engaged in the production of sugar. Through the wage provisions of the Act, wages for field workers have been increased materially. Minimum wages for field workers in Louisiana have been increased from a level of 50 cents per hour in 1959 to $1.30 per hour in

PEECH

968, an increase of 160%. When you onsider that these wage rates have een increased by this percentage while ne price for refined sugar to consumrs has increased only 6.6%, you realze how important the wage provisions f the Sugar Act have been to the welare of those laborers working in the ugar industry. The increased efficincy of sugar cane farms and factories as made it possible to pay these inreased wages.

In 1963 and 1964 because of the Cuban Crisis, our Mainland Cane Prouucers were asked to grow additional ane acreage. They responded to the equest made by the United States Government only to have their acrege cut back again in subsequent years. Our acreages have been reduced a total f 28% since that time not considering ne recent proportionate share anouncement. Taking into considerafon the recent proportionate share anouncement, our acreage for 1970 will e approximately 19 per cent less than ne 1964 acreage. I emphasize that ne land, the labor, the equipment, the rganization and know how along with ll other essentials necessary to produce dditional sugar from domestic cane s readily available. The production rom additional acreage is needed in ne area to maintain the economy, to rovide jobs for people who need to be ept on the land and to insure adequate upply of sugar during periods of mergencies.

One other factor which is often overooked in discussions of the sugar proram and its effectiveness is that the rogram is self-financing through the axing provisions contained in the Act. Taxes collected more than off-set the ompliance payments made to farmers or complying with proportionate hares, marketing quotas and wage provisions of the Act.

The present Act will expire in 1971 nd it is time that we begin serious conideration of changes that should be nade in the legislation when it is to be xtended by the Congress. Since the rop to be planted in the fall of 1970 vill in the most part be marketed in the calendar year 1972, it is **very important** that the Act be considered and extended during the calendar year 1970. We urge you, Mr. Secretary, to recommend to the Congress that hearings be held and the Sugar Act be extended during 1970. When the Sugar Act was last considered and extended by the Congress in 1965, it was the intent of Congress that the traditional domestic areas supply more than 60% of our domestic requirements. (The traditional domestic areas are: Mainland Cane, Beets, Hawaii, Puerto Rico and the Virgin Islands). Because of unusual circumstances, Puerto Rico has been unable to supply its quota in recent years and because of the provisions of the Act, her deficits have been given to foreign suppliers with the result that the traditional domestic areas are now furnishing only 55% of our domestic requirements. We believe this situation should be corrected when the act is extended. We in Louisiana are ready to work with the Department and the other domestic sugar interests and the Congress in correcting this inequity. We believe Mr. Secretary, that it is in the best interests of the people of the United States that we have a strong and viable sugar industry. We do not believe it is to be in our best interest to place too much dependence on foreign suppliers for our needed supplies of sugar. The extended dock strike of last December and January taught us that we could be caught short if too much dependence is placed on these sources of supply. It does not seem right for our farmers to be restricted in the acreage that they may grow when there are no alternative crops to be grown; when acreage is available for growing additional sugar cane; when labor and equipment is available; when jobs are needed to keep the people on the farms; when because of the balance of payments problem we need to keep as much of our money as we can at home; and when it is in the best interests of the American consumer that he be assured of an ample supply of sugar at reasonable prices at all times.

Mr. Secretary, there are other

(Continued on next page)

SPEECH

amendments of a minor nature that should be made while the Act is being considered. We are ready to discuss these with your staff. The important thing is that we get on with the task as soon as possible. We urge you to initiate action leading to a recommendation from the Administration to the Congress that action be taken during 1970 to modify and extend the Sugar Act.

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THE SUGAR BULLETIN

Vol. 48 — No. 2 OCTOBER 15, 1969

ial Bulletin of the American Sugar Cane League of the U. S. A.

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PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH
IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

THE
SUGAR BULLETIN

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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UP FRONT WITH THE LEAGUE

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By A. W. Dykers

Fair Price Determination Issued

The U.S.D.A. has made public its "Fair & Reasonable" price determination for the 1969-70 crop of Louisiana sugar cane. The period covered by the determination this season is 28 weeks beginning on October 10, 1969 and running through April 23, 1970. The season last year covered 29 weeks. The following is the official news release from Washington concerning the determination. It is dated October 3, 1969.

* * *

The U. S. Department of Agriculture today announced its determination of fair and reasonable prices for the 1969 crop of Louisiana sugarcane. The determination continues the sharing relationship and other provisions of the 1968-crop determination except for an increase in the maximum processing rate for sugarcane damaged by a general freeze. The previous rate of $3.00 per gross ton of cane, established in 1951, has been increased to $3.40 per gross ton to more nearly reflect current factory operating costs for processing sugarcane.

The period for determining the season's average price for raw sugar and molasses is Oct. 10, 1969, through April 23, 1970. The period for determining the delivered average price of raw sugar is Oct. 10, 1969, through Dec. 31, 1969, for 1969-crop sugar, raw value, marketed in 1969 under the processors' marketing allotment, and Jan. 1, 1970, through Feb. 26, 1970, for 1969-crop sugar, raw value, not marketed in 1969. The raw sugar and molasses prices used as the basis for sugarcane payments are those quoted by the Louisiana Sugar Exchange, Inc. The basic price per ton of standard sugarcane is $1.05 for each one-cent per pound of raw sugar determined on the basis of the weekly, season's or delivered average price, as elected by the processor in writing to the State Agricultural Stabilization and Conservation Service office not later than Oct. 17, 1969.

Producers received an average of $9.03 per ton from processors for 1968-crop sugarcane. In addition, they received Sugar Act payments averaging $1.30 per ton of sugarcane.

The Sugar Act of 1948, as amended, requires producers who also process sugarcane grown by other producers to pay prices determined by the Secretary to be fair and reasonable as a condition for eligibility for payment under the Act.

A public hearing on fair and reasonable prices was held in Houma, Louisiana, on June 26, 1969.

Government Payment To Farmers

The following paragraphs are from the October 13th news release by Glenn R. Timmons, Economist of the American Sugar Cane League, in his weekly news release which he calls "The Sugar Bowl". The information is enlightening and timely and, we are sure, will interest the readers of The Sugar Bulletin.

"We will soon be hearing a great deal about government payments to farmers. If past history holds true someone will try to compare sugar pay-

(Continued on page 26)

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for
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The Sugar Bulletin

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

The 1969 Grinding

One mill has started grinding the 1969 crop. Smithfield Factory in West Baton Rouge Parish started on October 8 following a five inch rainfall. Sucrose for the first day averaged 12.17 and purity was 75.92. Cane delivered for the first day came from Smithfield Plantation and three large shippers. There were several small problems in the mill during the first days of grinding but these were rapidly corrected. Sterling Sugars, located in St. Mary Parish, is reported to have started grinding on October 13. Details on purity and sucrose are not complete at the time of this writing. Meeker Sugar Coop. is also reported to have started on October 10. No details are available at the time of this writing.

Many mills have reported plans for beginning grinding either on Monday October 20 or Wednesday October 22. Sucrose reports on pre-grinding test show both sucrose and purity to be high in all areas of the belt. A set of pre-harvest reports received from St. James Sugar Coop. show Brix 15.65, Sucrose 12.01, Purity 76.74. This was an average of 102 samples. The date was October 6. In these same samples stalk weight was low; cane was short; and juice volume was also low. Some individual high quality samples showed C.P. 55-30 first year stubble 12.50 sucrose with 74.23 purity, L. 60-25 1st stubble 14.10 sucrose with 80.71 purity, C.P. 48-103 1st stubble 14.32 sucrose with 80.72 purity, C.P. 52-68 1st stubble 14.01 sucrose with 83.65 purity. However, looking over the entire group of samples received L. 60-25 and C.P. 48-103 show the highest sucrose and purity. Most samples of L. 60-25 are 13 per cent sucrose and above; most samples of C.P. 48-103 are 12.50 per cent sucrose and above; and most samples of C.P. 52-68 were between 11.5 and 12.0.

It appears from reports received that this will be a good sucrose year. However, in the opinion of the writer, this crop will be lighter in cane yields than earlier predictions indicated. In mid-August the writer was predicting that this crop would yield 27.5 net tons of cane per acre for the State average. However, a sustained drought since that time in most areas has materially reduced the chance of this crop being that good. Stalk population is still good and this crop, being restricted to less than 75 per cent of the normal acreage, is on the best land and, therefore, can still average 26 net tons of cane per acre if stalk weight improves following the recent rains.

Growers should try to get the most from every ton of cane. The best way to do this is to deliver fresh cane. Fresh cane is worth more to the grower than stale cane. A number of studies conducted over several years have proven beyond any doubt that stale cane hurts growers as well as processors. The weight loss in stale cane is one of the material losses. Growers can conduct their own experiments on the farm. This can be done by weighing cane on several feet of row and then placing the cane back on the heap row. Weigh the cane again at 3 days, 5 days and 7 days. Weight loss can be as high as 10 per cent depending on time and weather conditions. Purity always goes down in stale cane and sucrose goes down most of the time. Mills can process more fresh cane than stale cane per day. This can make grinding shorter which reduces the risk of freeze losses. It will save labor costs per ton in the field since most growers have more delivery capacity than daily cane quota. No matter how you look at it, stale cane cost growers money. Deliver fresh cane and make more money.

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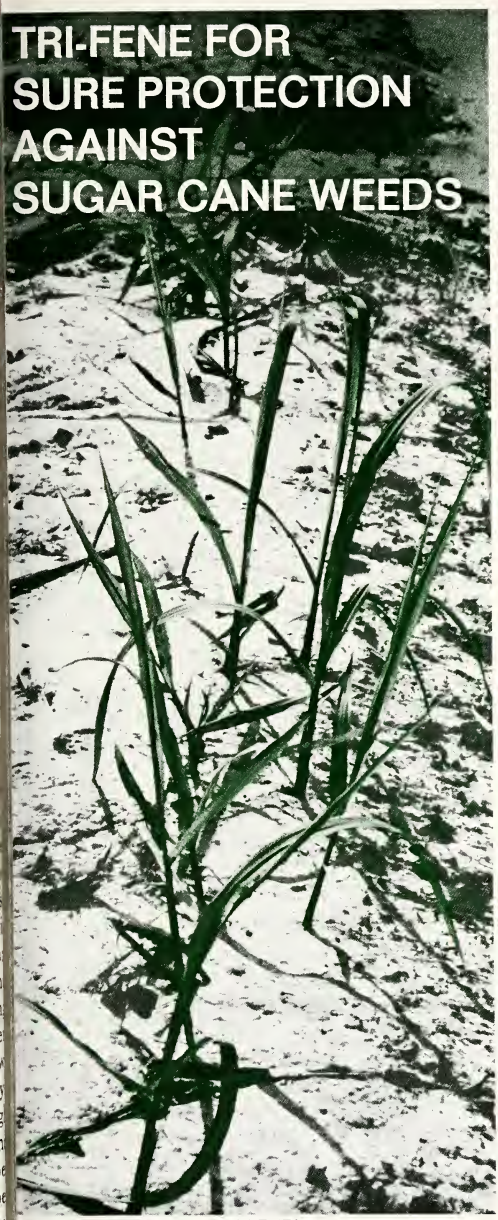

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RECEIPTS OF OFFSHORE RAWS AT NEW ORLEANS (LONG TONS)

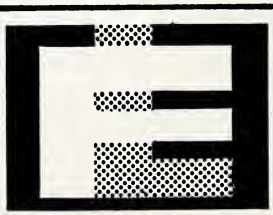
	American	Godchaux Henderson	Colonial	South Coast	Southdown	Supreme	Totals	Cumulative*
1968	527,003	274,149	371,435	57,883	67,552	73,480		1,371,502
1969								
January	None	None	None	None	None	None	None	None
February	42,106	15,400	24,471	None	2,279	None	84,256	84,256
March	37,160	32,472	32,920	None	1,988	None	104,540	188,796
April	100,103	32,456	30,322	None	16,371	4,700	183,958	372,754
May	57,675	37,163	27,508	7,000	7,100	10,000	146,446	519,200
June	27,581	34,518	41,333	8,033	8,803	6,500	126,768	645,968
July	97,864	27,626	45,372	8,000	22,640	8,200	209,702	855,670
August	35,244	27,151	39,775	3,480	13,992	7,632	127,274	982,944
September	34,816	48,146	27,440	17,763	2,000	10,199	140,364	1,123,308

***Does not include offshore raws transloaded from ships to barges in the Mississippi River for Industrial Sugars, Inc., and Sucrest, These shipments amounted to 179,614 long tons in 1968**

The January through September 1969, total is 147,602 long tons.

Used Equipment for Cane Fields

1. Used AC Model D Motor Grader, s/n 5338, Power Circle Turn, Front Wheel Lean, Scarifier, 8.25x20 (10 Ply) Tires.
   Condition Good—Lake Charles, La.
2. Used AC HD11E, s/n 11089 Tractor, 22" Shoes, Canopy, Winch, 11HA Angle Dozer Blade.
   Condition Good—Baton Rouge, La.
3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.
4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.
5. Used AC HD6E, s/n 12613 Tractor, 20" Shoes, Hydraulic Angle Dozer Blade, Carco Winch.
   Condition Good—Baton Rouge, La.
6. Used AC HD6E, s/n 10352 Tractor, 20" Shoes, Hydraulic Bulldozer Blade, Canopy.
   Condition Good—Baton Rouge, La.
7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11706, GM 3-53 Diesel Engine, 24" Shoes, 40' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
9. Used Lima 25 3/4 Yd. Dragline, s/n 336-72, Air Controls, AC 344 Diesel Engine, 30" Shoes, 40' Boom, Fairlead.
   Condition Fair—Baton Rouge, La.



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NEW AND USED EQUIPMENT—PARTS—SERVICE—RENTALS

IN WASHINGTON WITH FERRIS & GODFREY

By Josiah Ferris and Horace Godfrey

Coordinated Effort Pays Off

A coordinated effort on the part of ıpporters of farm programs and par-ıcularly the members of the Louisiana elegation in the House of Representa-ves recently showed how such efforts ›uld be used to help farmers and save .rm programs.

When a motion was made in the ouse of Representatives by Congress-ıan Whitten, Chairman of the Sub-ommittee for Appropriations for griculture, for the appointment of ›nferees to resolve differences be-ween the House and Senate Appro-riations Bill, a motion was made im-ıediately by Representative Conte ıpported by Congressman Findley nd others, who are avowed opponents f farm programs, to instruct the House onferees to insist upon limitations on ayments to farmers. Congressman Vhitten immediately made a prefer-ntial motion to table the motion by epresentative Conte. A roll-call vote as taken and Congressman Whitten's ıotion to table a motion to instruct ›nferees by Representative Conte won y a narrow margin of 181 to 177.

On May 27, when the USDA Ap-ropriations Bill was passed by the louse, a roll call vote to limit pay-ıents was carried by 224 to 142. The fforts of the entire Louisiana delega-on to secure votes in support of Con-ressman Whitten were really outstand-ıg. In fact, the work done by them ı switching some votes after all votes ad been taken resulted in a victory for arm program supporters.

The USDA Appropriations Bill now oes to conference to work out dif-erences but the conferees are at liberty › use their judgement in working out uch differences without specific in-structions. Such coordinated effort by an entire delegation from the state working with the Chairman of the full committee in the House, Congressman Mahon, and with Congressman Whitten and others is outstanding achievement when you realize that only 49 Congressmen out of 435 come from areas that could be considered rural.

* * *

Biographical Sketch

In a recent newsletter, we promised to give you a brief biographical sketch of members of the Louisiana Delegation in subsequent articles. The first of such sketches is on Senator Ellender who is the second ranking member in the U. S. Senate in length of service.

SENATOR ALLEN JOSEPH ELLENDER of Houma, Louisiana, born in Montegut, Terrebonne Parish, Louisiana, a lawyer and farmer, a graduate of St. Aloysius College, New Orleans, Louisiana and Tulane University of Louisiana and served as city attorney, Houma, 1913- 1915; District Attorney, Terrebonne Parish, 1915-1916; Delegate to Constitutional Convention of Louisiana in 1921; member of the House of Representatives of Louisiana, 1924-36; Floor Leader, 1928-32 during administration of the late Huey P. Long, Governor; Speaker of the House of Representatives, 1932-36; elected to the U. S. Senate, November 3, 1936, and has served continuously since January 3, 1937. He is the second man in the U. S. Senate in continuous service as a senator. His service tenure is exceeded only by Senator Russell of Georgia who has served four years longer. His position as Chairman of the Senate Agriculture and Forestry

(Continued on next page)

IN WASHINGTON

Committee and as second man on the Appropriations Committee,—two of the most important committees in the U. S. Senate, are important positions as far as agriculture or sugar legislation or appropriations are concerned.

Subsequent articles will give biographical sketches of other members of the Louisiana Delegation.

UP FRONT

(Continued from page 21)

ments with grain payments. This is impossible because sugar production falls under the Sugar Act and not the general Farm Bill.

"Under the Sugar Act growers are required to pay at least the minimum wage as established by the U.S. Department of Agriculture, and they must follow certain child labor restrictions. If the grower is also a processor he must pay fair prices for the cane he buys. Any grower who complies with these conditions receives a conditional payment.

"The smaller grower receives more per pound in conditional payments than the big grower. The smallest grower sereives 0.8 cents per pound for the sugar he produces. The largest grower gets 0.3 cents per pound.

"The money for these conditional payments does not come from the U.S. taxpayer. Instead refiners pay a tax of 0.5 cents per pound on all sugar they refine. This money goes into the U.S. Treasury and is used to make conditional payments each year. It is interesting to note that the amount of money collected by the refining tax exceeds the amount paid to sugar producers each year. Since 1938 the Sugar Act has provided a profit of about $600 million to the U.S. Treasury. This means that the Sugar Act is subsidizing the American taxpayer, not the other way around.

"Whenever someone writes about huge government payments received by Louisiana sugar growers they always single out our two largest producers, South Coast Corp., and Southdown, Inc. South Coast and Southdown are not only growers but they are also refiners. Therefore they not only receive payments under the Sugar Act but they also pay the refiners tax which finances these payments.

"In 1967 South Coast Corp. received $280,780 in payments under the Sugar Act. They paid about $1.1 million in refiners tax under the Sugar Act. Southdown, Inc. received $185,662 in 1967 and paid about $1.0 million in refiner's tax. In other words these two sugar cane growers pay much more into the Sugar Act than they receive. It is interesting that the critics of the Sugar Act payments never mention this."

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION THE SUGAR BULLETIN

I hereby certify the following:

1. That the names and addresses of the publisher, editor, managing editor and business managers are: Publisher—The American Sugar Cane League of the U.S.A., Inc., New Orleans, La. Editor—Gilbert J. Durbin, New Orleans, La. Managing Editor—Andrew W. Dykers, New Orleans, La.: Business Manager—none

2. That the owner is the American Sugar Cane League of the U.S.A., Inc., New Orleans, La.—Thomas H. Allen, Franklin, La., President,—E. Schexnayder, White Castle, La.; 1st Vice-President—F. A. Graugnard, Jr., St. James, La. Secretary-Warren J. Harang, Jr., Thibodaux, La., Treasurer.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are none.

4. The average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the 12 months preceeding the date shown above was 4,792.

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THE SUGAR BULLETIN

Vol. 48—No. 3 November 1, 1969

Official Bulletin of the American Sugar Cane League of the U. S. A.

HOSPITAL INSURANCE

Recently a letter and brochure was mailed to all League members explaining a hospital insurance plan you can buy. The League will not make one penny on this insurance. We are offering it to you because it is an excellent buy, and we know many of our members will need this insurance to help pay future hospital bills and to supplement other hospital insurance they may have. It is a simple plan with no red tape. We highly recommend it to you.

Special attention is called to the fact that salaried executive, administrative or professional employees of grower and processor members of the League are considered Associate Members of the League, without payment of dues in addition to those paid by their employers. For this reason, these salaried executive administrative or professional employees are eligible to buy the League's hospital insurance.

We suggest that each grower and processor tell his salaried employees about the hospital insurance. If you want extra copies of the brochure explaining the details of the insurance, let us know.

For a very reasonable premium, this insurance will pay a person $25.00 per day for each day he is confined to a hospital, beginning with the first day and for as long as 15 months during any one period of hospital confinement. There are a few understandable exclusions as explained in the brochure.

If a person acts promptly, he can get this insurance now without any medical examination.

A person can also buy this insurance to cover his spouse and children, if he wishes.

PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH
IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

THE
SUGAR BULLETIN

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Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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309 Universal Building, Washington, D. C. 20009

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UP FRONT WITH THE LEAGUE

By A. W. Dykers

Early Sugar Legislation Urged

Our friend, John B. Bunker, who some year ago was manager of the Godchaux Sugar Refinery, when it was owned by National, and who is now President of the big Holly Sugar Corporation, has suggested an early beginning of discussions leading to the extension of the Sugar Act.

The following is a press release from Holly dated October 27, 1969.

"President John B. Bunker of Holly Sugar Corporation called for a joint sugarbeet grower-sugar industry program to assure continuation of sugar legislation which expires in 1971.

"All sugar production and marketing in the United States has been governed for the past 35 years by Congressional legislation known as The Sugar Act. The Act assures that the country's sugar needs will be met at stable prices which will be fair to both consumer and producers.

"Speaking before the annual membership meeting of District 9, California Beet Growers Association, Ltd., at El Centro, California, Bunker pointed out that most countries have laws similar to our Sugar Act which regulate production of and trade in sugar. District 9 is composed of growers in the Imperial Valley.

"The president of the country's second largest beet sugar processor said that 'the time is now for growers and processors to get together to explain the advantages of the present sugar control system to consumers and to the government.'

"He said that this explanation should stress the fact that not only is the Act beneficial to our balance of payments but that the sugar program is self-supporting and doesn't cost the taxpayer a cent.

'To date, the program has paid **into** the United States treasury more than $570,000,000 **over** what the program costs to administer,' Bunker explained.

"He said that for 35 years the American sugar system has operated successfully for the American consumer, the American sugar producing and refining industry, the government and the taxpayer.

"Bunker criticized proponents of the cheap price of world sugar which he said was homeless sugar that has been dumped in search of a buyer. He said that in the world market it is a 'case of either feast or famine' and that sugar in this market is only about 10% of the world's supply.

"When international tensions rise or when supplies fall, prices soar above the American price. About five or six years ago, when sugar production in

(Continued on page 42)

HELP WANTED

Manager — Bookkeeper
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The Sugar Bulletin

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

Cane Yields

Cane yields per acre are erratic and many growers are extremely disappointed. Wesley Monson, a grower in the Napoleonville area and a High Yield Award Winner last year reported a yield of cane per acre of only 24 tons or about 12 tons lower per acre than yields of last year. Reports from others in that area are similar. Both Jimmy Landry and Joe Melancon of the Glenwood Cooperative gave a dim outlook of yields of cane per acre for the area between Labadieville and Napoleonville. The area sustained an extreme drought and cane is generally short throughout this section.

Cane is also short in the immediate Thibodaux area. The Reinze and Greenwood Plantations' crops are very short. Greenwood is mostly heavy land and cane suffered more on that plantation than on other farms in the area. Nevertheless, all growers in that immediate area suffered from lack of rainfall and the cane in the area is very short. Cane appears much heavier and taller from Raceland down Bayou Lafourche, and this area is probably the best in the cane belt, followed closely by the Terrebonne Parish crop. The crop in the immediate Houma area is particularly good.

There is some short cane on the Mississippi River. The crops in and around the Plaquemine and White Castle areas are certainly not tall. Reports are that yields of cane per acre are off in this area. Some cane in this area appears too short to be held by the sticker chains in the harvester. With cool weather on the way it doesn't seem likely that there is much chance for further growth. Trash will be a problem in this type cane.

With plenty of short cane around, both growers and processors are complaining about trash. Although there is an urgent need for rain now both for the planted cane and for the cane to be harvested, rain now will certainly increase trash. Poorly cut, short cane with plenty of leaf area, plus grass will pick up plenty of mud. There is little or nothing the grower can do about this type cane.

The crop in the Teche is also short. Reports on yields thus far have been erratic.

Other than an occassional sample, sucrose has been very good all over the belt. Purities are not in keeping with the per cent sucrose but purities are not very low. There were a few reports from mills that purities were dropping after several days of grinding but this situation seems to have improved. This was probably caused by growers, including the administration grower, harvesting some of the poorest cane after the first 4 or 5 days of harvest when sucrose was found to be good. However, finding that this poor material was low in purity caused growers to delay the delivery of this material and this probably improved the situation.

The harvest is going well. With the good weather of the past two weeks, cane is being harvested with the minimum of trouble, and costs are down. Some mill operators report the grinding season will be short.

It is hoped that cane yields will improve. Everyone in the industry feels that a good heavy rainfall will do much for both the standing cane and the planted cane.

IN WASHINGTON WITH FERRIS & GODFREY

By Josiah Ferris and Horace Godfrey

Artificial Sweeteners

At a hastily called press conference at 9:30 a.m., Saturday morning, October 18, Secretary Finch of Health, Education and Welfare announced a ban on the artificial sweetener, cyclamate, and ordered it to be removed immediately from the lists of substances "generally recognized as safe" for use in foods. Some interesting developments followed the announcement by Secretary Finch. During an off-the-record question and answer period, Secretary Finch suggested that a mixture of ten parts saccharin to one part sugar in beverages, and possibly other food products, would be acceptable to Health, Education & Welfare.

On Tuesday, October 21, a full page advertisement appeared in leading daily newspapers, stating in part that, "Soon you will be enjoying a new, better-tasting Diet Pepsi-Cola with a "touch" of real sugar and no cyclamates." The ad continued by stating that, "we have immediately formulated a completely new Diet Pepsi which is not only free of cyclamates, but which tastes noticeably better than our previous product. The secret is sugar—pure, natural sugar—but an amount so insignificant that people who watch their weight will be drinking and enjoying a true diet cola."

The Sugar Association, Inc., representing a substantial majority of domestic producers, processors and refiners of sugar immediately registered a strong protest to any Government action which would permit sugar to be used in combination with any artificial sweetener including saccharin because such combinations would be economic adulterations under Section 402 (b)(1) and (2) of the Food, Drug and Cosmetic Act. Furthermore, it is difficult to understand how the HEW could sanction such a mixture in view of (1) Dr. Ley's reported remark that the FDA will intensify its research on saccharin since little information is now available; (2) Dr. Steinfeld's statement that "the cyclamate-saccharin mixture induces cancer of the bladder in rats. . . ."; and (3) a study on which Abbott Laboratories recently reported that "implantation of pellets of saccharin in cholesterol into the lumen of urinary bladders of mice appeared to give rise to a significant incidence of bladder tumors, but further data would be needed to put this observation on a firm basis." Mainland Cane producers, processors and refiners joined the Sugar Association in protesting approval of the Food and Drug Administration of HEW of a mixture of natural and artificial sweeteners.

Biographical Sketch

In a recent newsletter, we promised to give you a brief biographical sketch of members of the Louisiana Delegation in subsequent articles. The second of such sketches is on Senator Russell B. Long.

SENATOR RUSSELL B. LONG, Democrat, was born in Shreveport, Louisiana, November 3, 1918, the son

(Continued on page 43)

SOME VARIETAL CHARACTERISTICS OF THE MORE IMPORTANT COMMERCIAL VARIETIES[1]

C.P. 52-68: This variety is the most widely grown in Louisiana. It is now used as the basis for comparison of other varieties in the selection program.

Advantages

1. Good yielder
2. Medium early in maturity
3. Good on both light and heavy soils
4. Resistant to red rot
5. Very erect
6. Fair milling qualities
7. Fair inversion rating
8. Very good stubbling ability

Disadvantages

1. Susceptible to mosaic
2. Average susceptibility to borer
3. Moderately tolerant to Dalapon

C.P. 48-103: It is one of the earlier maturing varieties now grown for commercial production. It should be planted on the better light soils where weeds and grass are not a problem. More growers should take advantage of this variety's high sucrose and mosaic resistance. In recent years, because of R.S.D. control and other improved management practices, many growers have been more successful in obtaining higher yields than when the variety was first released.

Advantages

1. Early maturity
2. High sucrose
3. Moderately resistant to mosaic
4. Moderately resistant to red rot
5. Good milling qualities
6. Satisfactory inversion rating
7. Relatively cold tolerant

Disadvantages

1. Lacks vigor
2. Susceptible to borer injury
3. Susceptible to Dalapon injury
4. Susceptible to Sinbar injury

L. 60-25: Now considered one of our important varieties. L. 60-25 is a high sucrose and an earlier maturing variety than C.P. 48-103. It has yielded well on both light and heavy soils.

Advantages

1. Early maturity
2. High sucrose
3. Good Vigor

Disadvantages

1. Susceptible to mosaic
2. Susceptible to borers
3. Susceptible to Dalapon

C.P. 61-37: It is a high tonnage cane and has yielded well on both light and heavy soils in sugar per acre. This variety has exhibited mosaic resistance equal to C.P. 48-103. Care should be exercised in not covering seed cane too heavily in light soil.

Advantages

1. High tonnage
2. Good cold tolerance
3. Moderately resistant to mosaic

Disadvantages

1. Medium to late maturity

L. 62-96: This variety has consistently outyielded C.P. 52-68 in sugar per acre. It is erect and well adapted to machine harvest. It is a high sucrose variety, with good extraction and low fiber.

Advantages

1. High sucrose
2. Early maturing
3. Erect

Disadvantages

1. Susceptible to RSD
2. Moderate susceptibility to mosaic
3. Low stalk population in plant cane

[1]Prepared by Denver T. Loupe, Specialist, LSU Cooperative Extension Service, Research Scientists of the LSU Agricultural Experiment Station, Baton Rouge, La., and the USDA Sugarcane Field Station, Houma, La., June 1969.

1968 HIGH YIELD AWARD WINNERS

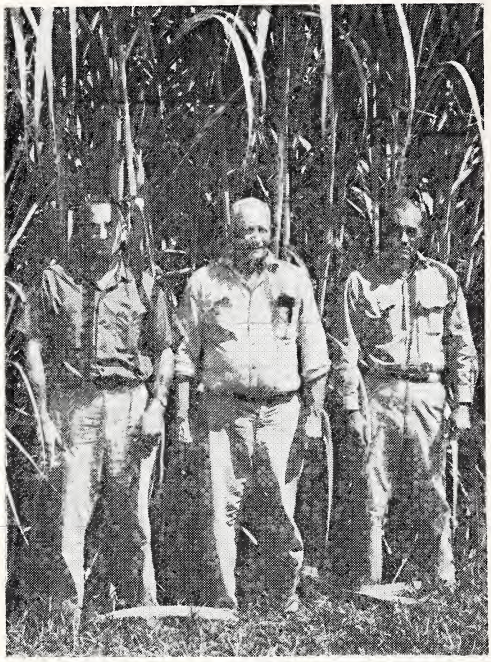
Clet L. Lasseigne, St. Martinville, La.
36.5 tons per acre on 162.2 acres.

Bryan and Robert Allain, Jeanerette, La.
36.73 tons per acre on 1,156.7 acres.

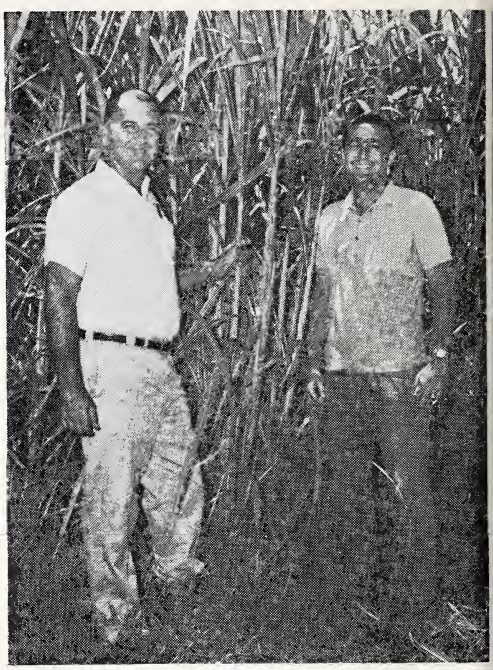
Allen Laperouse, St. Martinville, La.
36.1 tons per acre on 65.4 acres.

Roy Sam, St. Martinville, La.
33.1 tons per acre on 31.8 acres.

1968 HIGH YIELD AWARD WINNERS

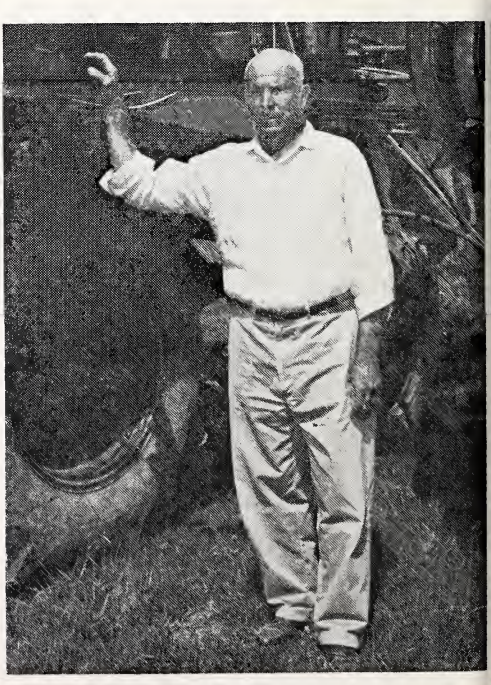


Tony, Expadie and Francis Laperouse,
St. Martinville, La.
38 tons per acre on 268.1 acres.



M. J. Jr. and W. P. Foster II, Franklin, La.
39.49 tons per acre in 62.6 acres.

Robert Judice, Jr., Franklin, La.
46.83 tons per acre on 40.4 acres.



Nicholas Paul, Franklin, La.
41.98 tons per acre on 123.9 acres.

1968 HIGH YIELD AWARD WINNERS

Louis Comeaux, Jeanerette, La.
43.71 tons per acre on 344.2 acres.

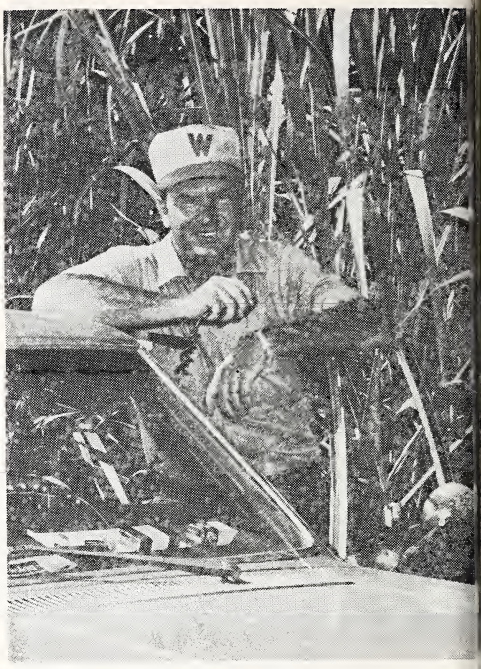
Ronald R. Hebert, Jeanerette, La.
42.4 tons per acre on 500.6 acres.

Richard Boudreaux, Labadieville, La.
44.8 tons per acre on 12.1 acres.

Leroy and Paul Zeringue, Raceland, La.
41 tons per acre on 74 acres.

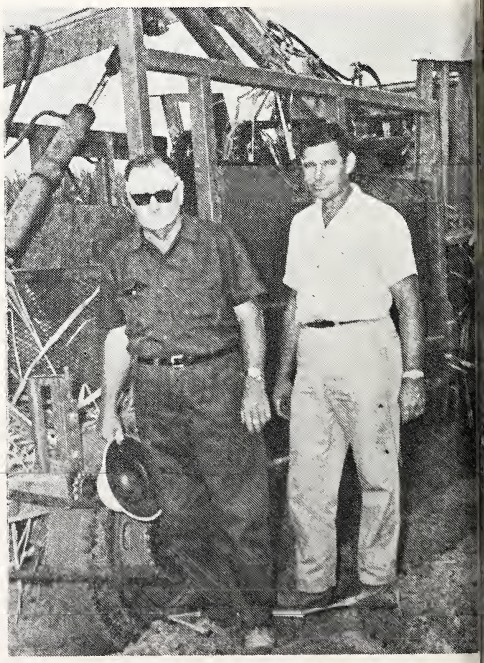
1968 HIGH YIELD AWARD WINNERS

Camille Naquin Jr., Thibodaux, La.
40.9 tons per acre on 153.5 acres.



Ashley Arcement, Napoleonville, La.
34.3 tons per acre on 1,068.7 acres.

Benson Thibodaux, Houma, La.
42.62 tons per acre on 200.6 acres.



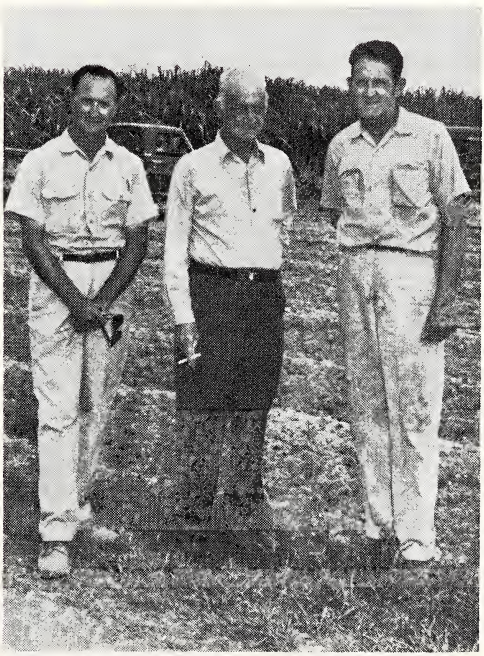
Eddie Bergeron and Arthur Landry
Dugas & LeBlance, Ltd., Belle Rose, La.
37 tons per acre on 604.4 acres.

1968 HIGH YIELD AWARD WINNERS

Joseph D. and Wilbert L. Landry,
White Castle, La.
42.5 tons per acre on 45.5 acres.

Eddie Falgoust, Vacherie, La.
42.5 tons per acre on 98.4 acres.

Alvin B. Daigle, White Castle, La.
40.9 tons per acre on 133.1 acres.



Bud and Ferand Falgoust and John Smith,
St. James, La.
39.7 tons per acre on 432.4 acres.

1968 HIGH YIELD AWARD WINNERS

Everett Caballero, Donaldsonville, La.
38.5 tons per acre on 594.9 acres.

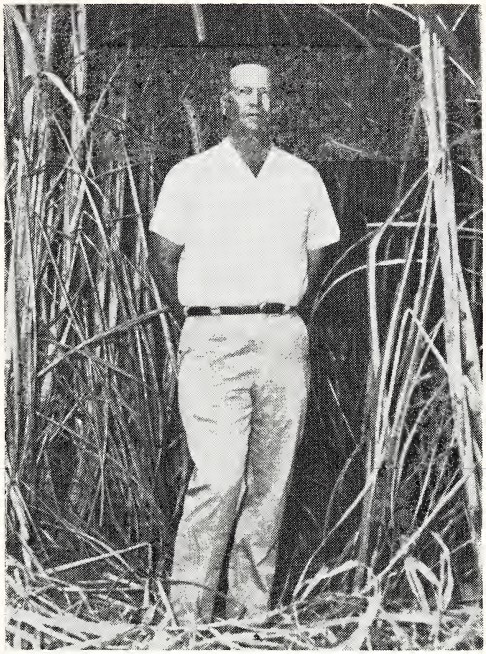
Chauvin Wilkinson, Port Allen, La.
37.8 tons per acre on 1,626.9 acres.

Joseph L. Chustz, Maringouin, La.
41.5 tons per acre on 27.6 acres.

Felton Bizette, Maringouin, La.
43 tons per acre on 73 acres.

1968 HIGH YIELD AWARD WINNERS

E. L. Lyles, Bunkie, La.
35.2 tons per acre on 131.2 acres.



Harvey Bubenzer, Jr., Bunkie, La.
33.68 tons per acre on 424 acres.

Used Equipment for Cane Fields

1. Used Cat 12 Grader, s/n 81-9255, 2-10:00 x 24 (8 Ply) Tires, 4-13:00 x 24 (10 Ply) Tires.
   Condition Fair—Lafayette, La.

2. Used AC HD11B-E Tractor, s/n 1829, 11HA Angle Dozer Blade, 22" Shoes, Canopy.
   Condition Fair—Baton Rouge, La.

3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.

4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.

5. Used AC HD16DC, s/n 6040, 24" Shoes, New Canopy, 16HS Straight Bulldozer Blade.
   Condition Good—Baton Rouge, La.

6. Used John Deere Pull type Tow Tractor, Rubber Tired, Diesel Engine, Drawbar.
   Condition Good—Baton Rouge, La.

7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.

8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11706, GM 3-53 Diesel Engine, 24" Shoes, 40' Boom, Fairlead.
   Condition Good—Baton Rouge, La.

9. Used Koehring 205 Dragline, s/n C11327, GM 3-71 Diesel Engine, 24" Shoes, 35' Boom.
   Condition Good—Baton Rouge, La.

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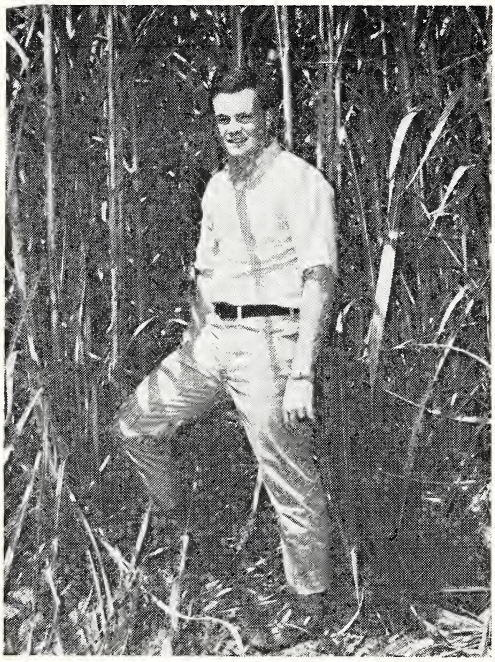
NEW AND USED EQUIPMENT—PARTS—SERVICE—RENTALS

4-H SUGARCANE AWARD WINNER

Kevin Judice, 16-year old son of Mr. and Mrs. Robert Judice, Sr., Centerville, St. Mary Parish, was the 1969 winner in the Annual State 4-H Sugarcane Production Program.



Kevin Judice, Centerville, La.
43.72 tons per acre on 4 acres.

His award was an educational trip to Chicago, sponsored jointly by the American Sugarcane League and the Louisiana Cooperative Extension Service.

Kevin won on the basis of his 1968 crop, which produced 43.72 standard tons per acre. It was a 4 acre block of C.P. 52-68 plant cane.

Dr. Denver T. Loupe, Extension Service Agronomist, notes Kevin harvested 40.37 net tons per acre, but because of the high sucrose and good purity, this tonnage converted to more than 43 standard tons per acre.

This was Kevin's third year in the 4-H Sugarcane Project, and his seventh year in the 4-H Club work. Mr. F. A. Swann, Jr., Associate County Agent for St. Mary Parish, supervised Kevin's sugarcane project.

Second and third places were won by Horton Guillotte and Chris Martin respectively, also from St. Mary Parish.

Fourth place winner was Lionel Bourgeois of Raceland. Lionel's project was supervised by Mr. Dalton Landry, Associate County Agent of Lafourche Parish.

UP FRONT

(Continued from page 31)

the world fell, prices on the so-called world market increased seven times.

'Although we felt some effects of this on our own markets, even this crisis had fewer repercussions here than elsewhere, thanks to the merchanism provided by the Sugar Act,' Bunker said.

"He also said that in efficiency, the United States paces the world in sugar production in output per acre and output per man hour of labor."

Sugar Technicians

The following notice is from the Louisiana State Office of the ASCS.

The Farmer Programs Division in Washington, D.C., will have two sugar technicians in Louisiana during the 1969 grinding season. They will be available to assist mills encountering problems with regard to Sampling, Testing, and Reporting Procedure.

Mr. Winfred Patton will work with sugar mills in the Eastern portion of the State. Anyone desiring to contact Mr. Patton may obtain his itinerary by calling the West Baton Rouge ASCS Parish Office in Port Allen. Telephone 504—348-0181, Extension 4310.

Mr. Edward Coons will work with sugar mills in the Western portion of the State. Anyone desiring to contact Mr. Coons may obtain his itinerary by calling the Terrebonne ASCS Parish Office in Houma. Telephone: 504—872-1591.

N WASHINGTON

(Continued from page 33)

f Huey P. and Rose McConnell Long. enator Long attended schools in hreveport, Baton Rouge, and New Orleans, Louisiana and graduated from ouisiana State University, B. A. degree in 1941, LL.B. degree in 1942. He was admitted to Louisiana bar in une, 1942. He is a member of Delta Kappa Epsilon, Omicron Delta Kappa, Order of the Coif Tau, Kappa Alpha, Phi Delta Phi, Lions, Elks and American Legion. He is a Lieutenant in the J. S. Naval Reserve and a veteran of World War II. He was elected to the J. S. Senate on November 2, 1948, to ill the unexpired term of the late John H. Overton; re-elected November 7, 950, for 6-year term, again re-elected n Nov., 1956, Nov., 1962 and Nov., 968 for 6-year terms. He has served s Assistant Majority Leader in the J. S. Senate and is currently Chairman f the Finance Committee and acts as lternate chairman of the Joint Committee on Internal Revenue Taxation.

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THE SUGAR BULLETIN

Vol. 48—No. 4 November 15, 1969

ial Bulletin of the American Sugar Cane League of the U. S. A.

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PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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Lloyd L. Lauden, Agronomist and Field Representative
Glenn R. Timmons, Economist
Earl J. Hicks, Assistant Agronomist
Howard J. Robichaux, Assistant Agronomist

The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

Washington Representatives: Josiah Ferris and Horace D. Godfrey
309 Universal Building, Washington, D. C. 20009

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UP FRONT WITH THE LEAGUE

By A. W. Dykers

Field Wages Increased

Wages for workers employed in the production, cultivation, and harvesting of sugar cane in Louisiana have been increased ten cents across-the-board, effective November 10, 1969, by the U. S. Department of Agriculture. This information was contained in an official release issued by the U.S.D.A. on October 31st. The following paragraphs are from the release.

"The determination increases minimum wage rates established by the prior determination by 10 cents per hour for all classes of workers employed in the production, cultivation, and harvesting of sugar cane in Louisiana. The new determination will establish wage minimums ranging from $1.40 per hour for unskilled workers to $1.55 per hour for operators of mechanical harvesting and loading equipment.

"A provision has been added requiring that when a producer makes payments to a third party, such as a utility company, at the request of and on behalf of the worker, the producer shall maintain on file for 3 years for the inspection of the worker or the local county ASCS committee receipted bills supporting these deductions.

"Department officials stated that the wage increases established are within the producers' ability to pay.

"Producers are required to pay wages not less than those determined to be fair and reasonable by the Secretary of Agriculture as one of the conditions to qualify for payment under the Sugar Act."

The new wages are as follows:

Class of worker	Rate per Hour
Harvest Work	
Harvester and loader operators	$1.55
Tractor drivers, truck drivers, harvester bottom blade operators, and hoist operators	$1.50
All other harvesting workers	$1.40
Production and Cultivation Work	
Tractor drivers	$1.45
All other production and cultivation workers	$1.40

It is interesting to note that the new minimum wage rate in the Louisiana sugar cane fields is now ten cents above the minimum agricultural wage called for in the Fair Labor Standards Act.

Help Needed

Because of postage regulations covering second class mailing privileges, the mailing list of The Sugar Bulletin has to be revised periodically to meet certain requirements. We will start mailing the Bulletin to a revised list beginning with the December 1, 1969, issue.

Every dues paying member of the American Sugar Cane League, and employees designated by them, are paid up subscribers and should receive The Sugar Bulletin twice a month. In addition to members of the League, quite a number of people outside the Louisiana Sugar Industry are also subscribers to the Sugar Bulletin.

When we revise our mailing list, occasionally a few mistakes occur and plates are taken out that should not be removed from the list. If this happens to you, (you will know it has if you do not receive the December 1, 1969, issue of The Sugar Bulletin), please let

(Continued on page 53)

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

Cane Yields Down

With the exception of down Bayou Lafourche, the immediate Houma area, and several other small isolated spots, cane yields per acre are lower than earlier predicted. In some sections, cane yields are considerably below what was anticipated. A prolonged drought starting in August in some areas is primarily responsible for this condition.

Cane is short. In the very dry areas C.P. 48-103 is exceptionally short and on many farms it is impossible to top the variety properly. Yields of cane per acre in this variety has been better than other varieties with the same height. The barrel is large and the weight per stalk is good in C.P. 48-103 in spite of the cane being short.

Sucrose in almost all areas is good. Purities were not too good at the beginning of grinding but there has been some improvement and purities, in general, are not now bad. Without a cane damaging freeze this crop will probably set a new record for sugar per net ton of cane ground.

The crop is being harvested very rapidly. Cane is very erect and harvesters are having very little trouble going through the fields. Dry weather has materially helped the harvesting operation. There is very little scrap being left in the field. It has been many years since fields were left so clean following the harvest. As of this time, growers are getting to the mill almost all of the cane grown in the field. It is hard to find any scrap left behind in many fields.

The extended drought has not only hurt the cane to be harvested but this drought has also hurt the cane planted for the 1970 crop. Some planted cane has already been plowed out and replanted and growers who have replanted some cane are now worrying about the second planting. It is the later planted cane that seems to be more adversely affected and particularly in the heavier type soils.

This drought has materially reduced yields of cane per acre. Without this drought, the State average could have been as high as 28 tons of net cane per acre. The stand was there and the cane was on the best land. As of this time, yields have to materially improve if the State is to average much over 24 net tons of cane per acre.

On the brighter side, some growers are reporting yields are improving in the better stubble cane. Plant cane yields should be higher and are normally better than yields of stubble cane. Growers have already removed all of the scrappy cane and most of the heavy land cane has been harvested. All of these facts seem to point toward yield improvement. Many growers believe a heavy rainfall would help cane yields. Certainly a good rain would help the planted cane.

HELP WANTED

Manager — Bookkeeper
for
Louisiana Sugar Mill in
Western Area.
Reply to M-1
The Sugar Bulletin

IN WASHINGTON WITH FERRIS & GODFREY

By Josiah Ferris and Horace Godfrey

Agricultural Legislation

Secretary Hardin and top officials of the U. S. Department of Agriculture have been meeting weekly with Chairman Poage and members of the House Agriculture Committee to discuss legislation for feed grains, wheat, cotton and wool. The 1965 Food and Agriculture Act which contains authorization for programs for these commodities will expire at the end of 1970. Chairman Poage has stated that early action is necessary since a decision must be made early in 1970 by the USDA on the type of wheat program which will be in effect for wheat to be harvested in 1971 which would be seeded beginning in August of 1970.

If no action is taken to extend or revise the 1965 Food and Agriculture Act, the Secretary of Agriculture will be forced to call a referendum among wheat farmers to determine if they would approve strict acreage allotments and marketing quotas along with a certificate type payment program now in effect on a voluntary basis. In the last wheat referendum held in 1963, wheat farmers rejected marketing quotas and subsequently the Congress passed legislation for a voluntary program. Chairman Poage has stated repeatedly that farmers need as much advance notice as possible so that they could make their plans for production of cotton and feed grains.

One major item which has entered into each discussion has been "payment limitations." The USDA has submitted four plans for discussion purposes:

Alternative Plan One would put a flat limit of $20,000 for payments to any one person.

Alternative Plan TWO would start reducing payments in excess of $10,000 but would provide no top limit. The reductions would be graduated with a reduction of 55% for any payment in excess of $1,000,000.

Alternative Plan Three would provide for reductions to begin on any payment in excess of $20,000 and to be graduated, having a top limit of $200,000.

Alternative Plan Four would start reductions at $2,000 with a top limit of $8,000.

Chairman of the Sub-Committee on Cotton, Congressman Thomas Abernethy, has scheduled hearings for the cotton portion of the legislation. Legislation for wheat and feed grains which are produced in all states and for cotton which is grown in more than 18 states is of major importance to members of the Agriculture Committees in the House and Senate. Sugar legislation normally follows legislation for these commodities.

* * *

F. Edward Hebert

In continuing our biographical sketches of members of the Louisiana Delegation, our third biography is on Congressman F. Edward Hebert.

Congressman F. Edward Hebert, was born in New Orleans, Louisiana, October 12, 1901. He received his education in public and parochial schools, Jesuit High School and Tulane University. He was a newspaperman on the New Orleans States and New Orleans Times-Picayune and was city editor of the New Orleans States. He was first elected to Congress in the 77th Congress and began his service on January 3, 1941. He has continuously served since that time and only ten members of the 435 members of the House have more service than Congressman Hebert. He is the first Louisianian in history to serve 29 consecutive years in the U. S. House of Representatives. He serves on the Armed Services Committee and the Standards of Official Conduct Committee in Congress.

THE SUPPLE SYSTEM
A NEW METHOD OF HANDLING CANE

By Glenn R. Timmons

During the 1968-crop, Mr. Ed Supple of Bayou Goula, Louisiana experimented with a new method of handling cane on the mill yard at Catherine Sugar Factory.

The Supple System makes use of a heavy-duty, construction-type tractor with a front-end mounted cane grab. Mr. Supple felt that if this method were successful it would eliminate the need for the revolving derricks.

After last year's trial, the people at the Catherine Sugar Factory had enough confidence in the Supple System to remove both derricks.

The Supple System has been used exclusively throughout the 1969-crop with very good results. This method deserves consideration by any mill manager faced with the problem of replacing yard derricks.

Anyone interested in observing the Supple System in operation can visit the Catherine Sugar Factory at Bayou Goula, Louisiana before the end of grinding.

The League is presently conducting a cost study of the Supple System, and the results will be presented at the February 1970 meeting of the American Society of Sugar Cane Technologists meeting in Baton Rouge.

This is one of two heavy-duty, construction type tractors with front-end, mounted cane grab that replaced two revolving derricks at the Catherine Sugar Factory this year. These two units comprise the new method of handling cane at the mill called "The Supple System." During the 1969 crop, both machines have been able to feed the mill and build up storage for night grinding. Preliminary studies indicate that each machine picks up between 4 and 5 tons of cane per grabfull.

THE LOUISIANA SUGARCANE VARIETY CENSUS FOR 1969 AND SUGGESTIONS FOR BETTER USE OF VARIETIES

By Rouby J. Matherne[1]

The percentage of acreage devoted to each sugarcane variety grown in Louisiana for the 1969 harvest has been determined in a survey made with the assistance of the County Agents[2]. The survey was conducted in 17 parishes. Parishes are grouped into three distinct areas: Southeastern, Southwestern, and Northern (Table 1). Each county agent estimates the acreage of individual varieties for each grower in his parish. Percentages for each area are calculated for the total acreages in sugarcane for the area. The total acreage in sugarcane for Louisiana is used to calculate percentages for the state.

[1]Research Agronomist, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, La.

[2]The author is indebted to the following County Agents who made the survey: Stanley Angelle, C. J. Arceneaux, A. J. Brackin, E. J. Burleigh, V. O. Calandro, Karmit Coulon, Sterling Deville, Kermit Ducote, Minus Granger, E. J. Lousteau, A. J. Melancon, Charles Miller, Claude Songy, Richard Sonnier, H. A. Webb, and Murphy Veillon.

Although C.P. 52-68 still exceeds all other varieties in acreage (Table 1) by a wide margin (26 per cent), it decreased 9 per cent this past year. Outfield variety yield experiments do not show decline in yields in this variety (1). These experiments, however, are conducted with every effort made to keep mosaic and Ratoon Stunting diseases as low as possible. Lower yields of C.P. 52-68 experienced by many growers are probably due to the high percentage of mosaic (unpublished data). Growers in the Southwestern area, although growing 17 per cent less than in 1968, are very concerned about the yields of this variety. Decrease in yields and the advent of new varieties probably explain the drop in acreage.

L. 60-25, released in 1966, has been increased almost to the limit of the seed supply. It is up to 14 per cent of the state acreage. Acreage of N.Co.

(Continued on next page)

Table 1. Results of the 1969 sugarcane Variety Census in Louisiana.

Variety	Southeastern Area[1]	Southwestern Area[2]	Northern Area[3]	Louisiana (total)	Changes 1968-69
	Percent	Percent	Percent	Percent	Percent
C.P. 52-68	33	51	33	40	− 9
L. 60-25	16	10	15	14	+ 11
N. Co. 310	4	29	7	13	+ 4
C.P. 55-30	21	3	8	12	− 3
C.P. 48-103	15		18	10	− 2
C.P. 44-101	4	3	5	4	− 3
C.P. 61-37	3	1	2	2	+ 2
Others[4]	4	3	12	5	

[1]Area consists of the following parishes: Ascension, Assumption, Lafourche, St. Charles, St. James, St. John, and Terrebonne.

[2]Area consists of the following parishes: Iberia, Lafayette, St. Mary, St. Martin, and Vermilion.

[3]Area consists of the following parishes: Avoyelles, Iberville, Pointe Coupee, and West Baton Rouge.

[4]Small acreages of the following varieties are being grown: C.P. 36-13, C.P. 36-105, C.P. 43-47, C.P. 44-155, and C.P. 47-193.

Table 2. Changes in distribution of Louisiana sugarcane varieties for the Southeastern area for the period 1960-69.

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Variety	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
C.P. 52-68	3	14	19	33	37	39	39	39	37	33
C.P. 55-30						5	14	18	24	21
L. 60-25									3	16
C.P. 48-103	6	9	9	8	11	13	15	17	19	15
N.Co. 310	18	22	20	17	11	9	5	5	6	4
C.P. 44-101	52	40	39	31	29	24	18	15	7	4
C.P. 61-37										3

Table 3. Changes in distribution of Louisiana sugarcane varieties for the Southwestern area for the period 1960-69.

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Variety	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
C.P. 52-68	2	11	20	33	41	45	58	57	68	51
N.Co. 310	25	31	29	28	24	18	20	32	14	29
L. 60-25									2	10
C.P. 44-101	45	35	33	27	25	26	15	10	7	3
C.P. 55-30						2	4	4	6	3
C.P. 61-37										1
C.P. 48-103	2	2	2	1	1	1		1	1	

Table 4. Changes in distribution of Louisiana sugarcane varieties for the northern area for the period 1960-69.

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Variety	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
C.P. 52-68	3	12	13	23	35	38	35	36	40	33
C.P. 48-103	4	5	6	8	7	10	12	16	16	18
Li. 60-25									2	15
C.P. 55-30						4	7	8	8	8
N.Co. 310	21	19	23	20	15	12	14	11	9	7
C.P. 44-101	48	38	32	25	18	17	15	11	9	5
C.P. 61-37										2

CENSUS

310, one of the older commercial varieties, increased by 4 per cent over 1968 due to the 15 per cent increase in the Southwest. It is susceptible to mosaic but also tolerant. All other varieties decreased except C.P. 61-37, released in 1967.

Farmers in the Southwestern area (Table 1) grow considerably more C.P. 52-68 and N.Co. 310 than those of the other two areas. They are not growing C.P. 48-103 and they grow less C.P. 55-30 and L. 60-25 than the two other areas. Farmers in the Southeastern and Northern areas have just about the same percentages for each variety except for C.P. 55-30. The Northern area has only 8 per cent C.P. 55-30 compared to 21 per cent for the Southeastern area.

Changes in distribution of Louisiana sugarcane for the areas during the period 1960-69 are found in Tables 2, 3, 4. C.P. 52-68 is decreasing in acreage in all areas, with the Southwestern area showing the largest decrease (17 per cent). C.P. 48-103 increased in acreage only in the Northern area. C.P. 55-30 dropped in acreage for the Southeastern and Southwestern areas.

The Southeastern area has four major varieties and the Northern area has three (2). Growers in these two areas are making good use of varieties.

Eighty per cent of the acreage in the Southwestern area is in the two highly mosaic susceptible varieties, C.P. 52-68 and N.Co. 310. Very little use is made of other varieties available. The high incidence of mosaic makes it unlikely that these farmers will succeed with the newer varieties that are rated moderately susceptible. Greatly reduced acreages of the susceptible varieties, especially N.Co. 310, would enhance the success of the new, moderately susceptible varieties. Varieties resistant to mosaic would easily replace the ramaining susceptible varieties. Resistant varieties exist in the testing program. However, even where a resistant variety proves to be agronomically acceptable, it will not increase in acreage sufficiently until at least 3 years after release. Its impact upon the industry would not be realized until 6 years after release.

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2. Matherne, R. J. Distribution of Sugarcane Varieties in Louisiana. 1969. Sugar Bulletin 47:4-6.

UP FRONT

us hear from you right away. Your help will be greatly appreciated.

* * *

A Reminder To League Members

December 15, is the last day you can purchase the hospital income plan sponsored by the League, regardless of your past medical or physical history. After that date, a statement of your past medical or physical history and perhaps a medical examination will be required. Unless you are old enough for medicare, you may be shocked by the amount of your hospital bill if you or a member of your family must spend time in a hospital. The League-sponsored hospital income plan will help you pay any such bill you may get.

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RECEIPTS OF OFFSHORE RAWS AT NEW ORLEANS (LONG TONS)

	American	Godchaux Henderson	Colonial	South Coast	Southdown	Supreme	Totals	Cumulative*
1968	527,003	274,149	371,435	57,883	67,552	73,480		1,371,502
1969								
January	None	None	None	None	None	None	None	None
February	42,106	15,400	24,471	None	2,279	None	84,256	84,256
March	37,160	32,472	32,920	None	1,988	None	104,540	188,796
April	100,103	32,456	30,322	None	16,371	4,700	183,958	372,754
May	57,675	37,163	27,508	7,000	7,100	10,000	146,446	519,200
June	27,581	34,518	41,333	8,033	8,803	6,500	126,768	645,968
July	97,864	27,626	45,372	8,000	22,640	8,200	209,702	855,670
August	35,244	27,151	39,775	3,480	13,992	7,632	127,274	982,944
September	34,816	48,146	27,440	17,763	2,000	10,199	140,364	1,123,308
October	19,310	3,325	31,265	3,660	2,133	None	59,693	1,183,001

*Does not include offshore raws transloaded from ships to barges in the Mississippi River for Industrial Sugars, Inc., and Sucrest. These shipments amounted to 179,614 long tons in 1968

The January through October 1969, total is 160,742 long tons.

Used Equipment for Cane Fields

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2. Used AC HD11B-E Tractor, s/n 1829, 11HA Angle Dozer Blade, 22" Shoes, Canopy.
   Condition Fair—Baton Rouge, La.
3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.
4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.
5. Used AC HD16DC, s/n 6040, 24" Shoes, New Canopy, 16HS Straight Bulldozer Blade.
   Condition Good—Baton Rouge, La.
6. Used John Deere Pull type Tow Tractor, Rubber Tired, Diesel Engine, Drawbar.
   Condition Good—Baton Rouge, La.
7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11706, GM 3-53 Diesel Engine, 24" Shoes, 40' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
9. Used Koehring 205 Dragline, s/n C11327, GM 3-71 Diesel Engine, 24" Shoes, 35' Boom.
   Condition Good—Baton Rouge, La.

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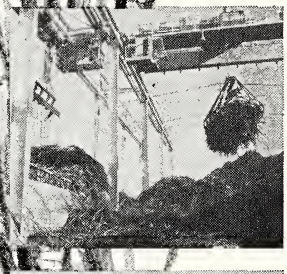

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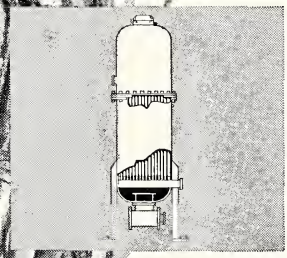

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THE SUGAR BULLETIN

Vol. 48—No. 5 December 1, 1969

cial Bulletin of the American Sugar Cane League of the U. S. A.

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PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

THE
SUGAR BULLETIN

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Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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UP FRONT WITH THE LEAGUE

By A. W. Dykers

The Old Mule

Well, The Old Mule is in trouble again. The drivers are goofing off and our critter is way behind the pace. At this writing the price of raw sugar in New York is 7.70 and the target price 7.97. This is a difference of 27 cents a hundred pounds.

We were about to say "this ain't hay" but, on second thought, we think it more appropriate to point out that 27 cents more for each 100 pounds of sugar would buy a lot of hay for our good old hay-burner.

Youngsville Burns

The Youngsville mill, of Youngs Industries, Inc., at Youngsville, La., was completely destroyed by fire during the early morning hours of Sunday, November 23rd. We do not have much of the particulars as we go to press except that the reports indicate that, despite the efforts of firemen from Lafayette, Youngsville, Erath, Delcambre, Breaux Bridge and Duson, the mill buildings burned to the ground. The surrounding buildings apparently were saved.

Youngsville was enjoying one of its better years with a high sugar production per ton of cane. We understand that, at the time of the fire, its grinding campaign was about half completed. The cane remaining on its schedule is being handled by other mills in the area.

Dr. Mikel Dies

It is with sincere regret that we record the passing of Dr. John J. Mikel, Assistant Director of the Louisiana State Agricultural Experiment Station. Dr. Mikel died on Sunday, November 23, 1969. The funeral took place in Baton Rouge, La., on Tuesday, November 25th.

Proposed 1970 Sugar Requirements

The following paragraphs are from the official news released regarding quotas for 1970 issued by the U.S.D.A. on November 17, 1969.

"The United States Department of Agriculture today announced that consideration is being given to:

"(1) A determination that the amount of sugar needed to meet the requirements of consumers in the continental United States for calendar year 1970 is 10.9 million short tons, raw value;

"(2) The establishment of annual quotas for domestic areas and foreign countries totaling that amount; and

"(3) The authorization of charges to the quotas for foreign countries of 850,000 tons of raw sugar during the first quarter of the year plus the quantity of sugar imported this year for refining and storage under bond.

"All applications for set-asides of quota for importation of sugar from various countries in the first quarter of 1970 received on or before a date to be announced in the final order would be considered by giving first priority to average importations in the first quarter of the three years 1967 to 1969 inclusive, second priority to increasing minimum allocations to 5,000 tons and third priority to permitting importations from a country with insufficient history of up to 20 per cent of its annual quota in the first quarter. Any additional sugar to be allocated against such applications would be prorated on the basis of average importations, 1967 through 1969."

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Reply to M-1
THE SUGAR BULLETIN

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

November 15 Freeze

A sneak freeze on Saturday, November 15, with some temperatures reported in the low twenties, caused considerable concern throughout the cane belt. Both Thibodaux and St. Martinville reported 22°F. near cane fields. The Meeker Sugar Coop. in the Bunkie area reported only 25°F. Cane fields were very dry and the night was still and the damage was greater than anyone would have predicted.

Damage surveys made soon after the freeze by the writer and others showed that cane in the low temperature areas had suffered considerable damage. Cane on the outside of the fields showed internal cell damage at the ground level. Cane on the inside of these fields showed varying degrees of damage depending on the yield of cane in the field. In heavy tonnage fields, damage was restricted to the top of the stalks. In light tonnage fields damage was much more severe and sometimes stalks were damaged to the ground level even deep into the field. Short, thin stand fields were badly hurt.

Although this freeze was not as severe as the November 3, 1966 freeze, the effects of this freeze could have been as bad and possibly worse than the 1966 freeze. The reason for this is because of a prolonged drought during the growing season there was an abundance of short cane generally around the belt. In many cases this short cane could not be properly topped. If the frozen tops on this type cane deteriorated the mill would have trouble.

Soon after the freeze, growers were asked to cut and deliver to the mill the short, thin cane first. In general this has been done. However, in some areas, there was more than a small amount of short cane around, and particularly in the St. Martinville, Breaux Bridge, Lafayette, Broussard, and Youngsville areas. The drought was more severe in these areas, and cane shows the effect of this to a greater extent. As of this writing November 28, no mill in this area, or any other area, has reported any trouble with frozen cane.

Mills which will complete grinding operations during the first week of December should experience no difficulty as a result of this freeze if short cane was taken early after the freeze. Mills with longer schedules may have some difficulty, unless growers do everything possible to get all of the short cane out immediately, and growers deliver extremely fresh cane. Following burning, frozen cane goes bad fast. Cut, burn and deliver cane in 24 to 36 hours. This will be of material help and, if this is done, there is a chance that all the cane can be saved.

Check fields for damage. Split stalks lengthwise to determine damage. Don't use green areas in leaves as an indication of good or badly damaged cane. Damaged tissues are water-soaked. Back, heavy soil fields generally suffer most. Take these out first, after harvesting the short cane.

Growers who examined stalks of C.P. 61-37 lengthwise to determine tissue damage were pleased to find only very slight damage and about the same or possibly better than N. Co. 310. This may be a feature of this variety that may influence a large acreage, particularly for the areas which are usually worse hit by freezes.

IN WASHINGTON

Senator Holland Retires

Sugar producers and processors will lose a good and important friend at the close of Congress in 1970. Senator Spessard L. Holland (D-Fla.) announced recently that he would not be a candidate to succeed himself next year. Senator Holland who will be 78 when his present term expires, would, if he stood for re-election and won, be 84 years old at the end of his next term. Senator Holland gave health problems as his reason for not seeking a fourth full term.

Senator Holland is a native of Bartow, Florida and received his education in Bartow public schools with a Ph.B (magna cum laude), Emory College, 1912; LL. B., University of Florida, 1916; honorary LL.D., Rollins College, Florida Southern College, Emory University, Florida State University, University of Miami, D.C.L., University of Florida; HH.D., University of Tampa. He is a former school teacher, practicing attorney, prosecuting attorney, county judge, state senator, Governor of Florida and was appointed to the United States Senate, September 25, 1946, by Governor Caldwell to succeed the late Charles O. Andrews. He was elected to the Senate in November, 1946, November, 1952 and November, 1964. He is a veteran of World War I and was awarded the Distinguished Service Cross in 1918.

As Chairman of the Agriculture Appropriations Committee for the past several years, he has successfully led the fight in the Senate against the efforts to tie payment limitations onto appropriations bills. In addition to a key spot as Chairman of the Sub-Committee on Appropriations for Agriculture, Senator Holland ranks immediately behind Senator Ellender on the Agriculture Committee. He is also a member of the Aeronautical and Space Sciences Committee and the Joint Committee on Reduction of Federal Expenditures.

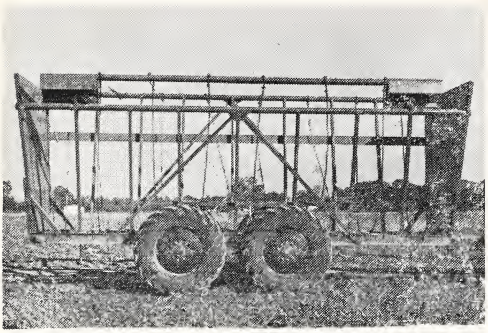
It has been a special privilege and pleasure to work with Senator Holland on both the Senate Agriculture and Forestry and Senate Appropriations Committees. He is and has been a friend of the farmer and we will personally miss him as we know he will be missed by farmers throughout the United States.

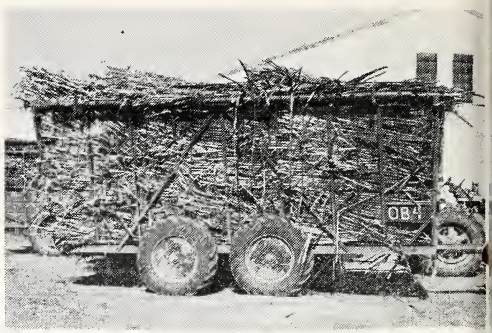
Hale Boggs

In continuing our biographical sketches of members of the Louisiana Delegation, our fourth biography will be on Congressman Hale Boggs.

Congressman Hale Boggs of New Orleans was born on February 15, 1914, on the Mississippi Gulf Coast. He was educated in the public and parochial schools of Jefferson Parish, Louisiana, and was graduated from Tulane University with a B.A. degree in 1935 and LL.B degree in 1937. He was first elected to the 77th Congress and was the youngest Democrat in Congress at that time. He served in World War II as an officer in the United States Naval Reserve and United States Maritime Service. He was nominated to the 80th Congress in 1946 and has served continuously since that time. He serves as Majority Whip; second man on the important Ways and Means Committee; is on the Joint Committee on Internal Revenue Taxation; the Joint Committee on Reduction of Federal Expenditures; and the Joint Economic Committee. He has been an American delegate to the Interparliamentary Union since 1948; and was Chairman, Committee on Elections, 82nd Congress and ranking minority member, 83rd Congress. He served as Chairman of the Special Subcommittee on Narcotics, 83rd Congress; Chairman, Subcommittee on Foreign Trade Policy, 84th and succeeding Congresses; Chairman, Subcommittee on Highway Financing, 84th Congress; a member of the President's Commission on the Assassination of President Kennedy; parliamentarian, Democratic National Convention, 1964; and Chairman, Platform Committee, Democratic National Convention, 1968. Congressman Boggs holds one of the most important positions in the House of Representatives.

THE FOUR WHEEL CANE WAGON





For the past two Louisiana harvesting seasons, a new type cane cart has become progressively popular in the Louisiana sugar district. It is hauling an average of ten tons of this year's "light" cane and will handle heavier loads of normal cane.

Gilbert J. Durbin, General Manager of the American Sugar Cane League, asked Mr. C. Lambert Duhe, who is manager of the Duhe Brothers Planting Company of New Iberia, where the wagon was first conceived, to tell us something about it. The following letter is in reply to Mr. Durbin's request.

Dear Gilbert;

"In reply to your recent phone conversation inquiring as to how I got the idea of large tandem-axle cane buggies I shall, like the younger generation, 'tell it like it is.'

"As we of the older generation well know 'Necessity is the Mother of invention.' In 1967 our factory converted partially to chain-net dump system. All of our carts were the old, small, single-axle type designed to carry about three tons. After hurricanes, etc. we couldn't afford to junk what we had and buy larger capacity single-axle carts that were just beginning to appear on the market.

"Like many other farmers, we had chain-net extensions fabricated which converted and enlarged our old, small buggies. We knew that we were inviting trouble when this was done—here we were greatly increasing the load on old equipment that was overloaded even before this increase.

"Our fears were soon fact. On our rough roads tires popped like corn at a Saturday night double-feature movie house; wheels broke; tongues bent and broke; and tractor draw-bar trouble greatly increased. Our service trucks couldn't begin to keep up with our troubles. We lived in fear of serious accidents.

"Even in the midst of our own troubles, we noticed that farmers who had purchased brand new larger single-axle buggies were having their problems too—broken hubs, tire trouble, etc. with resulting overturned carts. When it rained, most farmers with these large new carts, were having difficulty getting two loaded buggies out of the fields and ended up by using only one as long as field conditions were unfavorable.

"After mulling over the problems and hazards of two-cart single axle tows, we came to the conclusion that none of it was very safe or desirable. True, economics increasingly demanded that we move more cane to the factory at less cost; but the inherent dangers involved in increasing capacity by using two larger single-axle buggies didn't appear to be the answer.

"When we first hauled by truck-trailer we used small capacity single-axle trailers. As the trucks got more powerful we loaded heavier on the same trailers and troubles increased with the load increase. So what did we do? We extended the truck trailer and added another axle.

"We thought that a large capacity four-wheeled buggy might work in the

fields and happened to mention casually to Mr. George Davis and his son Darryl of Davis Machine Shop, New Iberia, that we intended to build a large four-wheeled wagon to try out next year. They knew that our '67 harvest was almost over and that we had our hands full trying to keep our present equipment rolling; so they volunteered to build the prototype for us, using old 36" wheels and axles from junked buggies. We told Mr. Davis that we wanted as big a pay-load in a single wagon as we had in two carts. Within about four days we had the 'monster' in our muddy fields (it had rained about 2".) Much to our amazement, the darned thing seemed to work—no bogging, no trouble turning, and much lighter pulling even with a heavier load. It seemed too good to be true. Other farmers looked at the monster buggy and would not believe that an old M. V. or U. C. tractor could pull one loaded under dry conditions let alone under wet adverse conditions. They had to see for themselves; and they did.

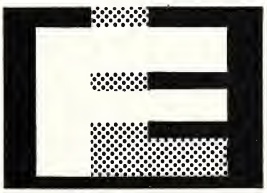
"After seeing that the hastily built tandem prototype buggy worked very well, Mr. Davis contacted major manufacturers and had hubs, axles, wheels, and tires designed especially to carry heavier loads. He also greatly strengthened the frames and bodies of the monster buggy. We are well into our third season with the prototype and the second season with others and are extremely pleased with results.

"As per your request we're enclosing pictures and a list of present owners of tandem-axled buggies as furnished by Davis Machine Shop. Sorry for the delay, but we were waiting on photos."

Editor's note: The large tandem-axel cane wagons are now also being manufactured by several machine shops. **The Sugar Bulletin** will be glad to print any news items about the wagons that the builders think will be of interest to our readers. The list of present owners referred to in Mr. Duhe's letter is available upon request.

Used Equipment for Cane Fields

1. Used Cat 12 Grader, s/n 81-9255, 2-10:00 x 24 (8 Ply) Tires, 4-13:00 x 24 (10 Ply) Tires.
   Condition Fair—Lafayette, La.
2. Used AC HD11B-E Tractor, s/n 1829, 11HA Angle Dozer Blade, 22" Shoes, Canopy.
   Condition Fair—Baton Rouge, La.
3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.
4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.
5. Used AC HD16DC, s/n 6040, 24" Shoes, New Canopy, 16HS Straight Bulldozer Blade.
   Condition Good—Baton Rouge, La.
6. Used John Deere Pull type Tow Tractor, Rubber Tired, Diesel Engine, Drawbar.
   Condition Good—Baton Rouge, La.
7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11706, GM 3-53 Diesel Engine, 24" Shoes, 40' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
9. Used Koehring 205 Dragline, s/n C11327, GM 3-71 Diesel Engine, 24" Shoes, 35' Boom.
   Condition Good—Baton Rouge, La.



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THE SUGAR BULLETIN

Vol. 48—No. 6 December 15, 1969

cial Bulletin of the American Sugar Cane League of the U. S. A.

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May we take this opportunity to wish the readers of

The Sugar Bulletin

A Merry Christmas and a Happy New Year

PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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UP FRONT WITH THE LEAGUE

By A. W. Dykers

Billboards

By now we are sure that most folks in the Louisiana sugar business have seen the billboard depicted here proclaiming that "This Is Sugar Cane Country".

The signs are the result of special negotiations conducted by the League's Public Relations Committee with the Lamar Advertising Company who have used their billboards to place the proclamation at 12 different locations on highways traversing the Louisiana sugar district. At present there are none in the Teche areas, but they should be appearing there shortly.

Strangers visiting our part of the world are now reminded that they are driving through the historic and romantic Louisiana sugar bowl. Also, we hope the billboards will remind Louisiana residents that the growing and processing of sugar cane is an important industry of our State.

RECEIPTS OF OFFSHORE RAWS AT NEW ORLEANS (LONG TONS)

	American	Godchaux Henderson	Colonial	South Coast	Southdown	Supreme	Totals	Cumulative*
1968	527,003	274,149	371,435	57,883	67,552	73,480		1,371,502
1969								
January	None	None	None	None	None	None	None	None
February	42,106	15,400	24,471	None	2,279	None	84,256	84,256
March	37,160	32,472	32,920	None	1,988	None	104,540	188,796
April	100,103	32,456	30,322	None	16,371	4,700	183,958	372,754
May	57,675	37,163	27,508	7,000	7,100	10,000	146,446	519,200
June	27,581	34,518	41,333	8,033	8,803	6,500	126,768	645,968
July	97,864	27,626	45,372	8,000	22,640	8,200	209,702	855,670
August	35,244	27,151	39,775	3,480	13,992	7,632	127,274	982,944
September	34,816	48,146	27,440	17,763	2,000	10,199	140,364	1,123,308
October	19,310	3,325	31,265	3,660	2,133	None	59,693	1,183,001
November	27,461	12,114	17,650	5,010	2,524	None	64,759	1,247,760

*Does not include offshore raws transloaded from ships to barges in the Mississippi River for Industrial Sugars, Inc., and Sucrest. These shipments amounted to 179,614 long tons in 1968

The January through November total is 171,434 long tons.

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

U. S. D. A. Basic Cane Breeding Program Expands

The U.S.D.A. has had a basic cane breeding program at Canal Point, Fla. for many years but for most of the years Mr. Carl O. Grassl, Cane Breeder at the Station, had many other duties to perform and time and facilities just did not permit a full time program which included both an adequate crossing and selection program. However, in 1965 the U.S.D.A. began expanding the basic breeding program and Mr. Preston H. Dunckelman was transferred back to Louisiana with one of his main responsibilities being the basic breeding program.

The expanded program is a team effort of scientists of both the Canal Point and the Houma Stations. In general, the work involves the evaluation of the basic germ plasm within the wild cane Sacchrum spontaneum and among various crosses including interspecific hybrids and forms of S. spontaneum, S. robustum and S. officinarum. Included also in the study is the evaluation of intergeneric lines involving sugarcane, with other grasses.

Under Mr. Dunckelman's direction, two hundred and sixty-two varieties of S. spontaneum have been rigorously screened for mosaic resistance at the Houma Station during the last five years. Of those tested 83 varieties have never taken the disease and 179 became infected. According to Mr. Dunckelman, there exist within the 83 mosaic resistant varieties wide generic diversity for erectness, internal stalk characteristics, sugar, size of stalk, suckering, and cold resistance. The cold tolerance, tillerability and stubbling quality of some of these wild varieties are amazing. The stalk population of some of these canes is almost impossible to believe.

More than 75,000 seedlings from basic crosses made at Canal Point, Fla., have been evaluated in the greenhouses and fields at the Houma Station in the last 5 years. In 1969, 12,350 stubble seedlings from 33 basic crosses growing in the field at Houma yielded 719 selections. And, according to Mr. Dunckelman, only canes which appeared to be outstanding in stooling, barrel size, erectness, brix, and freedom from disease and borer damage were selected and replanted for further study. One cross involving the wild U.S. 56-15-8 yielded 89 of 126 clones equal to C.P. 48-103 in brix. This alone is extremely encouraging.

There were 250 cold resistant canes selected and replanted this fall from 8,680 plant cane seedlings of the 1968 series. Many of these 250 new cold resistant canes had much green color left in the leaves and many live terminal buds when the selections were made on December 3, 1969. This was following the November 15 freeze of 26°F at Houma, La. At the same time, very little green leaf tissue and no live terminal buds were found in C.P. 48-103 and C.P. 52-68, which were interplanted throughout the seedling plantings.

Growers will be interested to know that a large new greenhouse was completed at Houma in early December this years, and that it will be used for growing seedlings from new basic crosses. Mr. Dunckelman hopes to screen 60,000 to 70,000 seedlings from basic crosses annually in this greenhouse and set to the field at least 15,000 to 20,000 a year.

It seems very logical that there would be some better new germ plasm for Louisiana in all of these new wild canes, particularly since the wild blood in the Louisiana varieties was not bred specifically for Louisiana.

The writer believes that this work will materially contribute to the variety picture of the future. Present studies indicate a higher population per stool and, therefore, more stalks per acre. Better cold, borer, and disease resistance is already apparent in these canes. The most encouraging part of the results is that some of the backcross selections made this fall look good enough for commercial canes. Some had low fiber and good sucrose.

IN WASHINGTON WITH FERRIS & GODFREY

By Josiah Ferris and Horace Godfrey

Proposal By Food & Drug Administration To Permit Mixing Of Saccharin With Sugar

The Food and Drug Administration on Tuesday, November 25, made a proposal by publication in the Federal Register that their policy regarding combinations of nutritive and nonnutritive sweeteners be revised as follows:

"(a) Any 'diet beverage' or diet beverage base made with combinations of nutritives and nonnutritive sweeteners must be so formulated that each ingredient is one which is generally recognized as safe and is not a food additive as defined in section 201(s) of the act, or if it is a food additive as so defined, is used in accordance with a regulation Part 121 of this chapter. To avoid confusion by diabetics, alcohols such as sorbitol and mannitol shall not be used. The nutritive sweetener shall be a mono-di-, or polysaccharide or combinations thereof.

"(b) The product is to be so formulated that its caloric value is at least 50 per cent less than the caloric value of the comparable product made without artificial sweetners.

"(c) If it is to be marketed under a name heretofore used on a product represented to have no, or only a few, calories per serving, the name shall be modified by the word "new."

"(d) (1) The label must bear a complete statement of ingredients except that spices, flavorings, and colorings may be designated as such without naming each.

(2) The label must bear a statement of the caloric content per fluid ounce, the carbohydrate content per fluid ounce, a statement of the percentage of saccharin or saccharin salt used, and the statement "Contains — mg. saccharin (or saccharin salt, as the case may be), per ounce, a nonnutritive artificial sweetener.

(3) To further avoid injury through inadvertent use by diabetics in the belief that the product does not contain carbohydrates, the label must bear the statement "Contains sugar(s); not for use by diabetics without advice of a physician."

"The Commissioner recognizes the problem created by the fact that stocks of containers already lithographed or otherwise printed may be the only containers available for these new products. Consideration will be given to the use of properly applied stickers or neck bands carrying the information set forth above in a conspicuous manner."

This proposal would permit the mixing of saccharin and natural sugar, which has not heretofore been sanctioned by HEW. It is our belief that the proposed policy would not be in the public interest since it:

(1) Implicitly assumes, incorrectly, that such mixtures are useful for weight reducing purposes, (2) presents a distinct and substantial potential risk to the public health, and (3) sanctions widespread economic adulteration of food products in contravention of the Federal Food, Drug and Cosmetic Act, as amended.

Even though numerous public statements by both officials of the Department of Health, Education and Welfare and the Food and Drug Administration indicate that there is a therapeutic value in the use of artificial sweeteners in the treatment of obesity, the October, 1969 issue of **FDA Papers** carried an article by John J. Schrogie, Director of Research and Liaison in the Bureau of Medicine, in which he stated:

"None of the few controlled studies reported to date have established a useful role for nonnutritive sweeteners as weight reducing aids except under the most carefully controlled conditions."

The proposal by FDA ignores the

(Continued on next page)

DOES JOHNSON GRASS MOSAIC GO TO SUGARCANE?

I. L. Forbes and Mike Giamalva

In May 1967 mosaic was first reported in Johnson grass, **Sorghum halepense,** in the sugarcane area of Louisiana (1) Since that time limited surveys by the writer, together with reports from a number of associates, have shown that mosaic occurs in Johnson grass in ever increasing amounts, especially in sugarcane fields. The natural conclusion by all, not excluding scientists, was that the virus disease in sugarcane and in Johnson grass is reciprocally transmitted. However, greenhouse transmission by juice inoculations over a period of two years has shown this assumption to be highly questionable.

In 1967-1968 very young sugarcane plants, grown from true seed, were inoculated by the conventional method of rubbing leaves with diseased juice from young Johnson grass plants. Only 15 plants of over 3,000 seedlings inoculated developed mild symptoms of mosaic, while sorghum and Johnson grass plants inoculated with the same virus, as checks, developed mosaic.

In no case did young clonal plants of several mosaic-susceptible sugarcane varieties, develop mosaic when inoculated with Johnson grass mosaic.

In 1969, much more extensive studies were made. Dr. Paliatseas crossed two very susceptible sugarcane varieties and we inoculated about 2,000 seedlings of this cross with Johnson grass mosaic; again by the conventional sand-abrasion method with fresh juice from diseased plants. Only 12 of the 2,000 seedlings developed mild symptoms of mosaic. The plants were cut back twice and new suckers inoculated with Johnson grass mosaic. Of the many plants reinoculated, only 1 developed mild symptoms of mosaic. Again, no inoculated clones developed mosaic.

During 1969 also, repeated inoculation experiments were made in attempts to transmit sugarcane mosaic to young seedlings of Johnson grass. In many experiments, Johnson grass seedlings were inoculated separately with sugarcane mosaic virus strains A, B, D, H, and I. In other tests Johnson grass seedlings were inoculated with a mixture of the 5 strains. No Johnson grass plant ever developed mosaic. As checks, the mosaic strains were transmitted readily to sorghum and to sugarcane clones.

The all-important question still remains. Is the Johnson grass mosaic virus transmitted by sugarcane vectors? This we have not been able to study. Through cooperation with the Entomologists, we plan to study this during the coming year.

[1]I. L. Forbes, Mike Giamalva, and Bobby Falgout. Sugar Bulletin 45, 1967.

IN WASHINGTON

very serious concern that saccharin may have the same carcinogenic effect as the cyclamates. The FDA itself has stated that it intends to intensify its research on saccharin safety. One would think that FDA would strictly limit the use of saccharin until or unless safe consumption levels can be firmly established.

Sections 402(b)(1) and (b)(2) of the Act provide that a food is adulterated when "any valuable constituent has been in whole or in part omitted" or "any substance has been substituted wholly or in part."

This is intended to protect the consumer with regard to foods for which no definition and standard of identity have been promulgated. Although artificially sweetened food products usually are sold at premium prices, artificial sweeteners are in fact cheaper than sugar. Combining saccharin and sugar would tempt certain manufacturers to substitute as much saccharin as possible for sugar to increase profits at the cost of deceiving and confusing the con-

IN WASHINGTON

sumer with a low nutritive value, adulterated product with a "touch of real sugar." Further, some producers undoubtedly would extol such products as having at the same time both the desirability of sugar and weight reducing qualities.

We trust it is not out of fashion for the FDA to regard as a serious matter economic adulteration which causes the consumer to pay high prices for less nutritive products which deceive a consumer to think there is an easy way to lose or control weight.

We cannot understand how the Food and Drug Administration could adopt such a proposal.

Godfrey Addresses Meetings

Horace Godfrey had the pleasure of speaking to the annual meeting of the Red River Valley Sugarbeet Growers Association in Fargo, North Dakota on December 8, and to the annual meeting of the National Sugar Beet Federation in Denver on December 10th.

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IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

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1969 Crop Completed

The harvest of the 1969 Louisiana sugar cane crop is over and the figures show that the crop was not nearly as large as the 1968 cane crop, but the reasons for the smaller crop are known. To begin with, the acreage was down 15 per cent by government order and most of the sugar belt experienced a most damaging drought during the growing season. The November 15 freeze did some small amount of damage but the impact of this was inconsequential as compared to the 15 per cent cut in acreage and the drought.

Although the incomplete and preliminary data from a survey conducted by the League showed that this crop was not one of the largest crops, it did make one all-time record. This crop produced the highest pounds of sugar per net ton of cane ever produced in Louisiana. It is difficult to believe that Louisiana would ever make 190 pounds of sugar per net ton of cane. The highest on record before this crop was slightly more than 182 pounds per net ton of cane. Louisiana produced 537,000 tons of sugar, raw value, for this crop and averaged about 24 net tons of cane per acre for the State average. The State had 257,000 acres in cane for sugar and seed of which about 21,000 acres were used for seed for planting the 1970 crop.

Another figure of importance was the per cent trash in cane. It averaged 7.4 per cent for the State which compares favorably with 8.1 per cent in 1968. The figure 7.4 per cent trash in 1969 appears small as compared to the high trash content growers received during the first part of grinding, but trash content became somewhat better following the freeze and the final figure is lower than for the 1968 crop.

Although cane yields per acre were not extremely low, the crop cannot be considered a good one. When volume is down in any business profits are down, and the sugar cane business is no exception. Harvesting costs were down and good weather made for an almost trouble free harvest. There was only a very small amount of down cane and breakdowns in equipment were few. But no matter how low operating costs are, a certain volume is required to meet fixed costs.

Louisiana and Florida cane growers are only allowed to grow cane on about 74 per cent of the land on which they would like to grow cane. This automatically forces volume down. Sugar factories have not done well either for the same reasons. A sugar mill must grind a said volume to cover costs. Some mills did not get this volume.

On the brighter side, Louisiana and Florida cane growers have received an acreage increase of about 12 per cent and this should increase volume. Three recently released varieties in Louisiana, L.60-25, C.P.61-37 and L.62-96, should produce more sugar per acre and, although the industry sustained a prolonged drought following planting, stands look good now. It is hoped that stands of cane will be as good on April 1, 1970, as they appeared to be now, in late December 1969.

IN WASHINGTON WITH HORACE GODFREY

By Horace Godfrey

Thanks And Best Wishes

December 31, 1969, Josiah Ferris, Jr., better known as "Joe" brought to a climax a long and distinguished career by retiring as Vice-President of the American and Florida Sugar Cane Leagues.

Joe first came to Washington in 1932, as Administrative Assistant to the late U. S. Senator, Park Trammell, and after Trammell's death, he worked with his successor, Senator Scott M. Loftin. He also served as Clerk of the Naval Affairs Committee of the U. S. Senate under the Chairmanship of Senator Trammell. Prior to coming to Washington, Joe received his education in public schools of Orlando, Florida, Georgia Military Academy and special courses at Alexander Hamilton Institute. He grew up in close contact with his father's newspaper business which included the Orlando Sentinel, Central Florida's largest daily. He served as Second Lieutenant, U. S. Army and saw active service on the Mexican border and expeditions into Mexico, France and Germany with the Sixth U. S. Calvary. After honorable discharge from military service he established and successfully operated an insurance and real estate business in Orlando, Florida, but later gravitated back to the newspaper business. He owned and published several award-winning weekly newspapers. In 1932, he was Democratic Manager in Orange County, Florida which resulted in overwhelming victory for all Democratic candidates from Franklin D. Roosevelt, President, to constables and justices of the peace.

He first became associated with the domestic sugar industry as Assistant Secretary, Assistant to the President and subsequently, Vice-President of the United States Sugar Corporation. He has served as Vice-President of the American Sugar Cane League of the U. S. A. and its Washington Representative for almost two decades. He has also served as Vice-President of the Florida Sugar Cane League and as a member of the Board of Directors and Executive Committee of Sugar Information, Inc., the advertising and public relation organization for the domestic sugar industry. He is a past member of the Board of Directors and Executive Committee of the Sugar Research Corporation and has served as public relations counsel for all the sugar growers and processors in Louisiana and Florida.

In addition to serving the sugar industry, Joe has been very active in civic affairs in his community. He was one of the organizers of the Masons Neck Citizens Association and served two terms as Vice-President and one term as President and was a member of the Board since its inception until September, 1967, when he resigned. He has also served as a member of the Northern Virginia Regional Park Authority and has served as a member of the Vestry and Junior Warden of Pohick Episcopal Church. Joe and Gladys reside at "Craigfair", overlooking the Potomac, in Lorton, Virginia. He has property interests in Winter Park, Florida and talks of retiring in that area.

The sugar group in Washington,

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by A. W. Dykers

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	4/15/69	6
Henderson, M. T.	4/ 1/68	7
	9/15/68	5
	6/ 1/69	10
Irvine, J. E.	8/ 1/68	7
	9/ 1/68	7
	8/ 1/69	18
Landry, W. L.	3/ 1/68	6
Mariotti, Jorge A.	4/ 1/68	7
Matherne, Rouby J.	7/ 1/68	6
	1/ 1/69	4
Mathes, Ralph	4/15/68	10
	5/15/68	6
	3/15/69	8
McCormick, W. J.	4/15/68	10
	3/15/69	8
Ricaud, Roy	2/15/69	23
	2/15/68	6
Rice, E. R.	9/ 1/68	7
Steib, Rene J.	4/ 1/68	6
	8/ 1/68	5
	1/15/69	4
	3/ 1/69	4
Timmons, Glenn R.	10/ 1/67	10
	12/15/67	7
	2/15/68	6
	4/15/68	8
	11/ 1/68	6
	11/15/68	5
	5/15/69	6
Tippett, R. L.	9/15/68	7
	9/ 1/69	4
Viator, Daniel P.	4/ 1/68	7
	9/15/68	5
	6/ 1/69	10
Zummo, Natale	2/ 1/68	5

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(Continued on next page)

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Four persons appointed by Superintendent
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IN WASHINGTON

(Continued from page 76)

along with the sugar farmers and processors in Louisiana and Florida and Joe's multitude of friends in USDA and in the Congress will miss him and his dedicated service. I first became acquainted with Joe shortly after arriving on the Washington scene in 1961. He has been a close friend and associate since that time. I will miss his counsel and guidance and I know that all of our sugar people in the Mainland Cane sugar area join me in thanking Joe for his many years of real service to the sugar industry. At the same time, we all wish for him and Gladys the best that life can offer.

* * *

As this article is written prior to the holiday season, let me take this opportunity to wish all of you HAPPY HOLIDAYS AND A HHAPPY AND PROSPEROUS NEW YEAR.

Dr. Miller Joins Sugarcane Research Staff at Canal Point

Dr. Jimmy D. Miller, a native of Oklahoma, has joined the staff of the U.S. Sugarcane Field Station at Canal Point as a Research Geneticist. He will conduct research on the development of improved, high-yielding, disease-resistant sugarcane varieties for Florida.

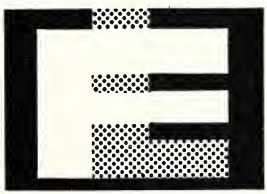
Dr. Miller was born in Marlow, Oklahoma. He was awarded the B.S. Degree by Oklahoma State University and the M.S. Degree by Purdue University. From 1967 to 1969 he was a research instructor on the staff at Auburn University. He completed the Ph.D. Degree at Auburn University in October, 1969.

Dr. Miller's previous experience in crop breeding, genetics, cytology, and crop ecology will enhance the research program at the Canal Point station. His research at Purdue University was on variability for height, yield, com-

(Continued on page 91)

Used Equipment for Cane Fields

1. Used Cat 12 Grader, s/n 81-9255, 2-10:00 x 24 (8 Ply) Tires, 4-13:00 x 24 (10 Ply) Tires.
   Condition Fair—Lafayette, La.
2. Used AC HD11B-E Tractor, s/n 1829, 11HA Angle Dozer Blade, 22" Shoes, Canopy.
   Condition Fair—Baton Rouge, La.
3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.
4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.
5. Used AC HD16DC, s/n 6040, 24" Shoes, New Canopy, 16HS Straight Bulldozer Blade.
   Condition Good—Baton Rouge, La.
6. Used John Deere Pull type Tow Tractor, Rubber Tired, Diesel Engine, Drawbar.
   Condition Good—Baton Rouge, La.
7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11706, GM 3-53 Diesel Engine, 24" Shoes, 40' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
9. Used Koehring 205 Dragline, s/n C11327, GM 3-71 Diesel Engine, 24" Shoes, 35' Boom.
   Condition Good—Baton Rouge, La.



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NEW AND USED EQUIPMENT—PARTS—SERVICE—RENTALS

SUGAR REQUIREMENTS AND QUOTAS FOR 1970 ANNOUNCED

(Official Release)

On December 17th the U. S. Department of Agriculture announced Continental United States Sugar Requirements for Calendar Year 1970 of 10.8 million tons; established quotas for domestic areas and foreign countries totaling that quantity and established limits on the first quarter importation of foreign raw sugar at 800,000 tons.

The action differs from the proposal announced November 17 (Press Release USDA 3541-69) principally in that 1970 sugar requirements have been reduced 100,000 tons from 10,900,000 tons and the limitation on first quarter importations of sugar have been reduced 50,000 tons from 850,000 tons. Both changes were made after considering the briefs submitted by interested persons and in view of the recent tendency of refiners and food processors to carry lower inventories.

The current price of raw sugar, New York duty paid, is 7.80 cents per pound. The price guide provided in section 201 of the Act is curently 7.99 cents per pound.

Provision has also been made for making minimum allocations of the 800,000 tons permitted to be imported during the first quarter so that any country may ship the smaller of 5,000 tons or the quantity applied for.

Views received in response to the proposed determination for 1970 in a general way may be summarized as follows:

The Industrial Sugar Users Group favored an 11.2 million ton requirements level; immediate reallocation of prospective deficits in area and country quotas; and elimination of first quarter limitations on imports of raw cane sugar or as a second choice that such limitations be raised to at least 950,000 tons. Cane sugar refiners recommended removal of limitations on imports of raw cane sugar during the first quarter.

Domestic beet sugar processors recommended that initial requirements be established significantly below the proposed level of 10.9 million tons. Puerto Rican sugar producers also considered the Department's proposed requirements level to be unduly large and recommended that it be substantially reduced.

The National Sugarbeet Growers Federation recommended that initial requirements be less than 10.9 million tons and concurred with the Department's proposal on first quarter import limitations. The Hawaiian Sugar Planters Association and the Mainland sugarcane producers and processors also recommended a lower requirements level than proposed, concurred with the Department on first quarter import limitations and recommended limitations on second quarter sugar importations.

(Continued on next page)

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DR. MILLER

(Continued from page 89)

ponents of yield, and character interrelationships among selected dwarf grain sorghums. At Auburn University he worked on turf research. He studied effects of the root-knot nematode on legumes for conservation use and breeding for nematode resistance.

Editor's note:

The following quotas for Domestic areas were set forth in the Official Release.

Production Area	Basic Quota	Total Quotas and Prorations
	(Short tons, raw value)	
Domestic Beet Area	3,215,667	3,215,667
Mainland Cane Area	1,169,333	1,169,333
Hawaii	1,150,000	1,150,000
Puerto Rico	1,140,000	1,140,000
Virgin Islands	15,000	15,000
Total Domestic Areas	6,690,000	6,690,000

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THE SUGAR BULLETIN

Vol. 48—No. 8 January 15, 1970

cial Bulletin of the American Sugar Cane League of the U. S. A.

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PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

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Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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We stand for the encouragement of Home Industries as against Foreign Competition

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

Chances For 1970 Stands

Louisiana cane fields were beginning to show a considerable amount of green color until the January 7, 8, and 9, 1970 severe freezes. Temperature around the belt varied but mid to low twenties degrees F, was not uncommon. These freezes were magnified by the fact that they were of long duration and there was little warming during the days.

It is much too early to determine if plant or stubble pieces were done any significant damage by this freeze alone, but it is safe to say that many plant cane seed pieces had already been badly affected by the prolonged drought following planting and this cold is another injury from which the plant must recover. Examinations of seed pieces at this time have never been of any great value in determining final stands of cane.

February and early March weather can be of vital importance in determining stands of plant cane. End of February surveys of seed pieces by the writer have often times shown similar condition of stalks, shoots, and eyes but final outcome of stands turned out totally different. So often, the condition of the seed piece is so damaged at the end of February that one additional week of cool and damp weather in early March can make the difference and greatly affect the seed piece, and stands will be poor. Whereas one week of warm weather at that time would have warmed the seed bed and strenghtened the weakened shoots, causing many more to survive and stands would have been considerably better.

Because there is always some question about whether plant cane stands will be good, growers should always keep some of the best old stubble to replace fields of plant cane that doesn't make a stand. This is good insurance and it does not cost very much. Because of the prolonged drought following planting and the recent freezes, the writer strongly urges all growers to keep some stubble. Do not plow out all old stubble. Just because stands were good immediately before the recent freezes is no assurance that stands will be good on March 15. Seed pieces were damaged by the drought, and by the cold, and although stands were, in general, good in sandy land and fair to good in heavy land, particularly where planting was done early, this does not mean that seed pieces can endure all adversities and still come up to a perfect stand. Be safe, hold some stubble just in case. It is far better to be safe than sorry.

The drought in the fall following planting has already caused some heavy land cane to be plowed out. There was some replanting done in the fall. There is still some heavy land cane, planted somewhat late, that does not look good and this type cane is questionable. This is the cane that did not come up in the fall except for only an occassional plant scattered through the field. In many instances the seed pieces are badly dried out and only some of the eyes still look sound. Be sure to hold some stubble cane for this type plant cane. Chances are that this type cane will not make a satisfactory

(Continued on page 99)

For the best weed control

Controls seedling Johnsongrass

Once Johnsongrass forms rhizomes, as shown above, it becomes well established. Left unchecked, it can take over your sugar cane crop. The most effective way to prevent this from happening is to control seedling Johnsongrass with "Sinbar".

Keep your sugar cane fields free of seedling Johnsongrass, as well as annual weeds and grasses, with a single application of Du Pont "Sinbar" in the spring. Or use a split application (fall plus spring).

No additives to "Sinbar" are needed. It kills germinating seedlings up to one inch tall. Also replaces multiple treatments usually necessary with other chemical herbi-

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in cane, spray SINBAR®

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Higher yields of sugar cane result when you control weeds and grasses with "Sinbar". This Louisiana field was treated with "Sinbar" in the fall. Picture taken in March shows the excellent control of winter annual weeds in the row.

cide programs. This reduces your application costs.

"Sinbar" is labeled for use in first-year stubble cane as well as in plant cane. It's an easy to use wettable powder that mixes readily with water. Get the most weed control for your money. Order your supply of Du Pont "Sinbar" from your local dealer today.

With any chemical, follow labeling instructions and warnings carefully.

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Better things for better living
...through chemistry

IN WASHINGTON WITH HORACE GODFREY

By Horace Godfrey

What Will The 70's Bring

As the decade of the '60's comes to a close and we start the decade of the 70's, one wonders what lies in store for the nation's agriculture. The 60's saw many changes. Some basic changes in the philosophy of farm programs and some major changes in the type of farm programs. Although sugar programs were not basically changed, farm programs for the major commodities of wheat, corn and other feed grains and cotton were changed. The change involved a realization of the necessity to keep prices for these commodities competitive in world trade and in the case of cotton— competitive with other fibers—realizing at the same time that American farmers could not necessarily control the cost of the things that they produced since their "inputs"—machinery, chemicals, fertilizers, interest and etc.—were costing more and more. In order for farmers to stay in the business of producing with these high cost inputs, a payment concept was developed with payment to be made to farmers on that portion of the commodity used within the United States. This concept really meant that the American public would pay taxes to support the payments in order to be assured of an abundant production and to keep the price down in the market place.

The decade of the 60's also saw a continuation of a decline in farm population which began following World War II in the early 1920's. With a decline in farm numbers, farmers' political influence also declined. With increasing demands on the Federal Treasury for federal money for various purposes, the decade of the 70's will find it much more difficult to achieve passage of farm programs, particularly those programs involving expenditure of federal funds. The reluctance on the part of many farm members of Congress to support legislation for urban and city areas has reduced the support for farm-oriented legislation.

Basic legislation authorizing the present corn, wheat, cotton and wool programs expires at the end of 1970. Basic legislation authorizing the Sugar Act expires at the end of 1971. Whether or not an extension of basic legislation can be achieved or whether new legislation will be written for wheat, feed grains, cotton and wool will be determined in the calendar year, 1970. If no extension or new legislation is passed, these commodities would still have programs of the old type. For example, corn and other feed grains would have no payments and no limits on production. Prices would be supported at a level determined by the Secretary between 50 and 90% of parity. Production of these feed grains would increase materially and government loans on such grains, with ultimate takeover by the government, would be costly. Farm prices could be expected to decline.

For wheat, all farmers growing wheat would be asked to vote in a referendum to determine whether or not they would have strict marketing controls with a continuation of payments as now made. (They disapproved this type program in 1964.) If they fail to approve such a program there would be no controls over production and government loans at 50% of parity for those farmers willing to restrict acreage. Cotton acreage allotments would continue and loans would be made to producers at no less than

IN WASHINGTON

65% nor more than 90% of parity. In order for cotton to be competitive in world trade, export subsidies would have to be paid. This would reinstall the program in effect prior to 1964 whereby foreign mills could buy American cotton cheaper than domestic mills. Output of cotton would increase and government costs would probably be as high as under the present type program.

No one can foresee what type of action will be taken but one thing is certain, if American agriculture is to continue to be the biggest business as well as the provider of an abundant supply of food and fiber at reasonable prices, then some programs must be designed to assure the farmer of an adequate return for his investments and labors.

IN THE FIELD

(Continued from page 95)

stand unless weather is extremely satisfactory.

This year should indicate whether the last 3 new varieties released to the industry, L 60-25, C.P. 61-37 and L 62-96, have the ability to make stands following adverse weather. Thus far L 60-25 and C.P. 61-37 have given good stands throughout the sugar belt. L. 62-96 is in commercial production for the first time this year.

HELP WANTED

Assistant Engineer for Large Louisiana Sugar Mill.

Reply to: E - 1
The Sugar Bulletin

RECEIPTS OF OFFSHORE RAWS AT NEW ORLEANS (LONG TONS)

	American	Godchaux Henderson	Colonial	South Coast	Southdown	Supreme	Totals	Cumulative*
1968	527,003	274,149	371,435	57,883	67,552	73,480		1,371,502
1969								
January	None	None	None	None	None	None	None	None
February	42,106	15,400	24,471	None	2,279	None	84,256	84,256
March	37,160	32,472	32,920	None	1,988	None	104,540	188,796
April	100,103	32,456	30,322	None	16,371	4,700	183,958	372,754
May	57,675	37,163	27,508	7,000	7,100	10,000	146,446	519,200
June	27,581	34,518	41,333	8,033	8,803	6,500	126,768	645,968
July	97,864	27,626	45,372	8,000	22,640	8,200	209,702	855,670
August	35,244	27,151	39,775	3,480	13,992	7,632	127,274	982,944
September	34,816	48,146	27,440	17,763	2,000	10,199	140,364	1,123,308
October	19,310	3,325	31,265	3,660	2,133	None	59,693	1,183,001
November	27,461	12,114	17,650	5,010	2,524	None	64,759	1,247,760
December	16,390	16,368	40,604	None	7,527	None	80,889	1,328,649
1969 Total	495,710	286,739	358,660	52,946	87,363	47,231		1,328,649

*Does not include offshore raws transloaded from ships to barges in the Mississippi River for Industrial Sugars, Inc., and Sucrest. These shipments amounted to 179,614 long tons in 1968

The January through December, 1969 total is 171,434 long tons.

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THE SUGAR BULLETIN

Vol. 48—No. 9 February 1, 1970

ial Bulletin of the American Sugar Cane League of the U. S. A.

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We stand for the encouragement of Home Industries as against Foreign Competition

UP FRONT WITH THE LEAGUE

By A. W. Dykers

Highway Safety Committee

The "Highway Safety Committee" was inadvertently omitted from the standing committees of the American Sugar Cane League listed in the January 1, 1970 issue of The Sugar Bulletin. This Committee is composed of the following members.

Andrew P. Gay, Chairman, Plaquemine, La. 70764
Thomas M. Barker, Lockport, La. 70374
Irving J. Bergeron, Cajun Sugar Coop. New Iberia, La. 70560
Murphy J. (Mike) Foster, Franklin, La. 70538
Kenneth H. Kahao, Port Allen, La. 70767
Denis Lanaux, Lucy, La. 70069
Lee Roy LeBlanc, St. Martinville, La. 70582
Marvin Marmande, Houma, La. 70360
Sabin Savoie, Belle Rose La. 70341
M. L. Shaffer, Jr., South Coast Corp., Houma, La. 70360
Edward T. Supple, Bayou Goula, La. 70716

E. K. Bynum Dies

Mr. E. K. Bynum, who is remembered for his work on sugarcane insects at the Houma Laboratory, died in his sleep on the morning of December 25, 1969 at his home in Saltillo, Mississippi.

Mr. Bynum was born at Saltillo in 1890. He obtained a B.S. and an M.S. degree in Enthomology from Mississippi State University. Before coming to Houma he worked with the Florida and Mississippi State Plant Boards. He served in the Army in World War I as 2nd Lieutenant.

In 1930, he began work on sugarcane insects with the U.S.D.A. Entomology Research Service at the Houma Laboratory. He did outstanding work there until his retirement in 1952. He is well remembered in the Mississippi River area for his work in wireworm control and in the Franklin area for his research leading to the control of the

sugarcane beetle. He did notable work in the propagation and distribution of the mealybug parasite which was valuable in decreasing infestations by this pest.

He also aided in research in the development of cryolite and ryania for control of the sugarcane borer, on larval parasites, and on over-wintering of the borer. His work, along with others, in determining the value of mass release of **Trichogramma** to control the sugarcane borer was especially notable. He was the author or co-author of many publications dealing sugarcane insects.

Mr. Bynum was noted for his untiring, conscientious work and for his sound judgment. He was a loyal friend and an interesting companion. He was a life-long member of the Methodist Church and a member of its governing body in Houma.

Mr. Bynum is survived by his wife, one daughter and one granddaughter, all of Saltillo.

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

Johnson Grass Control

Although much money and time have been spent on the control of Johnson grass in Louisiana sugar cane fields, the pest is still around and it is still causing the sugar industry a reduction in tons of cane per acre. Johnson grass is very hardy and extremely persistant. If given a chance it will take over. If control practices are relaxed for only one year it usually takes several years of intensive control to recapture earlier gains on the pest.

The fight to control this persistant grass is an almost never ending struggle. It takes careful planning, the correct amount of the proper chemicals, good equipment, and the best possible supervision if a good job of control is to be done. The recommendations for the control of Johnson grass and other weeds in sugar cane, Spring 1970 by Mr. E. R. Stamper, L.S.U. and Dr. Rex Millhollon, U.S.D.A. Houma Station are included elsewhere in this issue of The Sugar Bulletin. Growers should follow these recommendations as closely as closely as possible. Other chemicals and different rates of the chemicals recommended were tried in many experiments before the final recommendations were made. The business of Mr. Stamper and Dr. Millhollon is to do experimental work on chemicals to control grass in sugar cane fields. Both scientists spend their full time doing this job. They are researchers. These facts are given to show the time and effort that has gone into these recommendations. Cane growers should recognize that their business is growing cane and managing a farming business. Growers do not have the time to conduct painstaking research and therefore the recommendations of the scientists should be followed. And if this is done, far better results will occur.

An important part of the overall chemical weed control program is the condition of the equipment being used. A good sprayer with an agitator is an absolute necessity if proper work is to be done. The cost of a new sprayer is small as compared to the cost of the amount of chemicals that will be put through the machine over a few years.

Nozzles are of major importance. The correct nozzles properly adjusted can mean the difference between good and bad control of grass. The high cost of chemicals will simply not allow for poor use and poor control of grass.

T.C.A. can be used again this year. There has been an extension of the label for use in 1970 and attempts are being made this year to have the material re-labeled permanently.

Both Sinbar and the Fenac material have done a good job of weed control generally throughout the belt, but growers must be reminded that both of these materials can do harm to cane if improperly used. Careful mixing and proper supervision can prevent injury to cane and bring about good grass control.

HELP WANTED

Assistant Engineer for Large Louisiana Sugar Mill.

Reply to: E - 1
The Sugar Bulletin

IN WASHINGTON WITH HORACE GODFREY

By Horace Godfrey

Food, Information and Understanding

A recent survey of the effect of world-wide inflation on food prices shows that U. S. consumers continue to fare better than most. The study, conducted by the United Nations, compared food price increases in 45 countries for the period 1963 through 1967.

The table below shows the rise in food prices in the United States between 1963 and 1967, and comparable increases in other countries, (1963 = $1):

National Index

United States	$1.10
Canada	1.12
Australia	1.17
Japan	1.23
Spain	1.32
India	1.64
Yugoslavia	2.01

In 1969, Americans spent only 16.5% of their income after taxes for food—the lowest percentage ever—despite a general inflationary trend in the economy. The trend for the past twenty years shows:

Percent of Disposable Income Spent on Food in the U. S.

1969	16.5
1968	16.8
1967	17.1
1957-1959	20.6
1947-1949	24.6

The recent White House Conference on Nutrition is a perfect example of too little attention being paid to contributions to our health and well-being made by the American farmer. The general emphasis of this conference was geared to negative aspects of the food story with no mention of the achievements made by agriculture or the problems of agriculture and the food industry. The participants at the conference and the public did not, for example, receive any information as outlined above to the effect that United States citizens spend a smaller portion of their income for food than anywhere else in the world and that they enjoy the world's best and greatest variety of food. Much work needs to be done to create a better image for all of American agriculture.

* * * *

In continuing our biographical sketches of members of the Louisiana Delegation, our fifth biography will be on Congressman Otto E. Passman.

Otto E. Passman

Congressman Otto E. Passman of Monroe, Louisiana was born on a farm in Washington Parish, near Franklinton, Louisiana, June 27, 1900, of Irish-French-Holland Dutch extraction. He is owner of Passman Investment Company, Monroe, La., and served as officer in the U. S. Navy during World War II; member, First Baptist Church, Monroe, Louisiana; past State Commander, American Veterans of World War II, Inc.; member, American Legion; 33rd degree Scottish Rite Mason; member Grand Lodge of the State of Louisiana, Free and Accepted Masons; elected on November 5, 1946 to the 80th Congress; reelected to the 81st through the 91st Congresses.

Congressman Passman is a member of the important Appropriations Committee and is in the top 40 in senority in the House.

RECOMMENDATIONS FOR THE CONTROL OF JOHNSONGRASS AND OTHER WEEDS IN LOUISIANA SUGARCANE, SPRING 1970[1]

Weed control is an integral part of a complete sugarcane production program. For maximum yields of sugarcane in Louisiana, growers should also follow sound agronomic practices such as insect control, fertilization, disease control and variety selection.

Chemical herbicides are expensive, and unless they are properly applied at the right time, maximum control of weeds will not be obtained. Spray equipment should be in good condition and carefully calibrated(several times during a season) to deliver the proper dosage. Equally important, chemicals should be accurately measured or weighed.

When ground equipment is used, herbicides should be applied in a 30-inch band over the top of the row. All suggested rates of herbicides are based on band applications; broadcast rates are indicated where suggested.

JOHNSONGRASS CONTROL

Fallow Plowing

Fallow plowing is essential for the control of Johnsongrass. Effective fallow plowing reduces the population of seed in the soil by promoting germination and destroys rhizomes (underground stems). Begin fallow plowing in the spring, and replow whenever new Johnsongrass growth is about 10 inches tall. Six or more plowings may be needed during a growing season. Late fall and winter plowing following early harvested stubble has little or no effect in killing Johnsongrass rhizomes or germinating seed in the soil. At present, there are no chemicals that are economically feasible to substitute for fallow plowing.

[1]Prepared for distribution by the Cooperative Extension Service, Louisiana State University, Baton Rouge, Louisiana based on data and information of:

E. R. Stamper, Louisiana Agricultural Experiment Station, Baton Rouge, Louisiana Dr. Rex Milhollon, Crops Research Division, Agricultural Research Service, USDA, Houma, Louisiana.

Plant Sugarcane Treatment

If stubble sugarcane was infested with Johnsongrass, plant cane will probably have a Johnsongrass seedling infestation, even though the land was fallow plowed. Therefore, a complete chemical control program is recommended.

A. Removal of Winter Weeds

To be effective, preemergence herbicides must be sprayed evenly over a weed-free soil surface. Winter weeds should be removed from the row before preemergence herbicides are applied in the spring. Winter weeds are usually not a major problem in fields that were sprayed with a residual herbicide in the fall after planting.

Winter weeds may be removed or controlled in two ways:

1. Mechanical control. Remove weeds from the top of the row with a shaver, mechanical hoe, or other mechanical implements.

a. Shaving—the removing of excessive soil covering the seed cane, all weeds and grasses, and top growth of sugarcane killed by winter freezes.

Note: This operation is a judgement decision that must be made by the management of each plantation and should be based on conditions present each spring. Actual measurements of the soil over the plant cane should be made and excessive soil removed. Study has shown that most plant cane has excessive soil over the mother stalk in the spring of the year.

b. False shaving—the removing of all vegetation but little or no soil from the top of the row.

2. Chemical control. Spray the top of the row, approximately 30 to 36 inches wide, with either:

a. Silvex—1 lb./A (1 quart), **or with**

b. A mixture of 2/3 lb.A of silvex and 1/2 lb./A low volatile ester of 2, 4-D.

Application of either of these should be made as early in the season as practical.

Note: When applying these herbicides by airplane, use the same rates, but allow at least 10 per cent additional material for ditchbanks and headlands.

B. Application of Preemergence Herbicides

In fields of plant cane, regardless of previous treatment, it is suggested that the top of the row be sprayed with silvex as described above to provide temporary control of Johnsongrass seedlings and other weeds and grasses. The preemergence herbicide programs described below would then be applied after the row is off-barred and rebuilt. **Do not** delay the preemergence application longer than necessary, since silvex may not be effective for longer than two or three weeks.

Placing herbicides as high on the row as possible gives the best weed control with the least injury to the sugarcane. Preferably, the row should be off-barred and rebuilt (either in one operation or in successive operations) just prior to the application of preemergence herbicides described below.

1. TCA Program. When the plant sugarcane in off-barred, or when the first cultivation is made by chopping the sides, and the row is rebuilt, apply either of the following treatments:

a. A mixture of 5 lb./A of TCA (sodium **salt** formulation) and 1 lb./A (1 quart) of silvex on a 30-inch band with ground equipment.

b. A mixture of 6 to 8 lb.A of TCA and 1 lb./A (1 quart) of silvex with aerial equipment.

Repeat either one of these treatments after the cane is fertilized. This repeat and timed second application is extremely important to the success of the TCA program.

2. Fenac Program. Three commercial formulations of 2, 3, 6-trichlorophenylacetic acid (fenac) will be sold in Louisiana, these are:

1) Fenac—1 1/2 pounds per gallon of sodium salt of 2, 3, 6-trichlorophenylactic acid.

2) Trifene—2 1/2 pounds per galgon of sodium salt of 2, 3, 6-trichlorophenylacetic acid.

3) Fenacplus—1 1/2 pounds per gallon of the dimethylamine salt of 2, 3, 6-trichlorophenylactic acid—plus 1 pound per gallon of the dimethylamine salt of 2, 4-D.

The primary difference in Fenac and Trifene is that one formulation is more concentrated than the other. A table is presented in the back of this report which shows the quantity of each product that is required to give a specific rate of chemical by volume.

Fenacplus contains a more effective formulation of fenac acid than Fenac alone and also contains 1 pound per gallon of the same salt of 2, 4-D as the fenac formulation.

A. Apply Fenacplus in the spring after rows have been cleaned of winter weeds and have been off-barred and rebuilt.

a. Where Fenacplus, Fenac, Trifene or Sinbar was used in the fall apply Fenacplus at 3 quarts per acre on a 30-inch band where seedling Johnsongrass is a problem.

b. Where the residual herbicides were not used in the fall, use Fenacplus at 4 quarts per acre.

c. Use 3 quarts of Fenacplus per acre for annual weed and grass control where Johnsongrass seedlings are not a problem.

B. Fenac and Trifene are both preemergence chemicals and have no effect, if used alone on weed seedlings that have germinated or emerged from the soil. Thus, these materials should be applied early in the year before the temperature is warm enough to germinate weed seeds. Mixing Fenac or Trifene with silvex or the low volatile ester of 2, 4-D increases their effectiveness for both preemergence and early postemergence control of weeds.

a. Sugarcane planted in late summer or fall that was sprayed with Fenac or Trifene and silvex should have a re-

(Continued on page 110)

For the best weed control

Controls seedling Johnsongrass

Once Johnsongrass forms rhizomes, as shown above, it becomes well established. Left unchecked, it can take over your sugar cane crop. The most effective way to prevent this from happening is to control seedling Johnsongrass with "Sinbar".

Keep your sugar cane fields free of seedling Johnsongrass, as well as annual weeds and grasses, with a single application of Du Pont "Sinbar" in the spring. Or use a split application (fall plus spring).

No additives to "Sinbar" are needed. It kills germinating seedlings up to one inch tall. Also replaces multiple treatments usually necessary with other chemical herbi-

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Gives you higher yields

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cide programs. This reduces your application costs.

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With any chemical, follow labeling instructions and warnings carefully.

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...through chemistry

WEED CONTROL

(Continued from page 107)

peat application of a mixture of fenac at 1.1 lb./A (3 quarts of "Fenac" or 2 quarts of "Trifene") and 1 lb./A (1 quart) of silvex should be applied to a 30-inch band in the spring.

b. If Fenac or Trifene was not applied in the fall, a mixture of fenac at (4 quarts "Fenac" or 2 1/2 quarts "Trifene") and 1 lb./A (1 quart of silvex should be applied to a **clean** 30-inch drill.

3. Terbacil (Sinbar) Program

a. Areas treated with sinbar at 2/3 lb./A on newly planted sugarcane in late summer or fall, should have a repeat application at 2/3 lb./A in the spring on a 30-inch band.

b. Fields not treated with Sinbar or other long residual herbicides in the fall, should be sprayed with sinbar at 1 1/3 lb./A on a 30-inch band.

Note: Injury to plant sugarcane on light sandy soils in the Meeker-Bunkie area, some parts of the Teche and on the lower Mississippi River area have been observed from the above mentioned rates of both materials, fenac ("Fenacplus," "Fenac" and "Trifene") and terbacil ("Sinbar"). Lower rates of these materials should be used in these areas until the safety of the compounds are determined by individual growers. The variety C.P. 48-103 is particularly sensitive to Sinbar injury.

It is suggested that not more than .8 lb./A of fenac (2 quarts of "Fenac" or 1 1/4 quarts of "Trifene"), or 1/2 lb. of Sinbar be used on a 30-inch band on this variety **or on** the sandy soils mentioned above.

4. Alternate Method of Applying Fenac, Fenacplus, Trifene, or Terbacil (Sinbar). Johnsongrass seedlings and annual weeds that have emerged and are growing will not be killed by an application of these chemicals alone; therefore, one of the following methods may be used to destroy these seedlings:

a. Apply a mixture of 5 lb./A of TCA and 1 lb./A of low volatile ester of 2, 4-D with aerial or ground equipment, or

b. Use a "rotary pick" or wide hoe to completely "tear" the top of the bar and remove or kill all existing grass seedlings.

Following these treatments, the residual herbicides should be applied as suggested above.

Note: Do not mix Fenac, Fenacplus or Trifene in the same tank with either TCA or Dalapon.

STUBBLE CANE TREATMENT

A. Where Fenac or Terbacil (Sinbar) was Used in Plant Cane

1. If the level of weed control in plant cane was good and very little rhizome Johnsongrass is expected in the stubble, Sinbar may be used in first stubble cane **only** at a rate of approximately 1 lb./A on a 30-inch band.

2. Where Johnsongrass rhizomes are expected, both shaved and unshaved stubble should be treated with 7 lb./A of TCA plus 1 lb./A of silvex. This application should be made after off-barring or off-barring and rebuilding the row.

In fields or individual cuts where Johnsongrass is still a problem, apply either 7lb./A or TCA plus 2 lb./A of Dowpon or Dowpon alone described in the next section.

B. Where Fenac or Terbacil (Sinbar) was Not Used in Plant Cane

1. Stubble Shaved and Off-barred

Shaved stubble cane should be off-barred as soon as possible. Follow immediately with an application of 11 lb./A of TCA and 1 lb./A of silvex if the area is known to have a heavy infestation of Johnsongrass rhizomes. Adjust the equipment so the spray pattern covers the sides of the barfurrow, or the plowed loose soil if the row is rebuilt at the time of off-barring, as well as the top of the row. TCA is more effective when followed by rains and warm weather than in dry, cold weather. Thus, shaving, off-barring and TCA application is more effective when done in late February and March.

When Johnsongrass is still a problem after the TCA application, apply Dowpon at the rate of 2 to 4 lb./A with a ground sprayer. (See part C for aerial

application.) The ground application should be made in such a method to keep as much of the chemical off the sugarcane shoots as possible. Some varieties of sugarcane are more susceptible to injury from Dowpon than others, especially C.P. 48-103. Dowpon applications should not be made later than **May 20** on any variety.

2. Stubble—Not Shaved

If stubble was **not shaved,** or if it was shaved early and off-barring is delayed and the grass is growing, an application of 7 lb./A of TCA plus 2 lb./A of Dowpon plus 1 lb./A of silvex should be made. Mix these three chemicals together and spray in one application over the sugarcane and the grass. This application should be made in warm weather (temperature over 70°F). The grass should be actively growing and not over 10 inches high. This application should be made after the cane has been fertilized and the grass has recovered from burn or shock from the fertilization.

C. Aerial Application in Stubble Cane

Under some conditions it may be advisable to apply Dowpon to stubble cane with an airplane. The amount of grass, its vigor, the age of the grass and general environmental conditions will determine the feasibility of the application. From 2 1/2 to 4 lb./A (broadcast) of Dowpon are suggested, depending on the grass infestation and the growth of the grass. Ten per cent should be added to the acreage for ditchbands and headlands. Dowpon is more effective in low volume water applications than in high volume water applications. Some visible injury may occur on the more susceptible varieties of sugarcane; however, yields of cane have not been reduced in the past from these applications of Dowpon.

Dowpon applications should not be made on sugarcane later than **May 20.**

The use of an airplane in applying herbicides to sugarcane is very precise. A good ground crew that mixes the chemical well and in the correct proportion is essential. **Flagmen and the proper placement of the flags are absolutely necessary.** If these crews are not available it is suggested that the application **not** be made to the sugarcane by airplane.

CONTROL OF ANNUAL WEEDS, RAOULGRASS AND BERMUDAGRASS

Annual Weeds and Grasses

Some areas and individual properties in the Louisiana sugarcane belt have little or no Johnsongrass. These properties are usually infested with annual weeds and grasses. The following chemical programs are suggested for use in these areas.

Where Johnsongrass and Raoulgrass Seedlings are Not a Problem

1. TCA Program—Shaved or Not Shaved Plant and Stubble Cane

a. Apply 1 lb./A of silvex early in the season on the top of the rows of both plant cane and stubble. If an airplane application is made, use 1 1/4 lb./A of silvex. If the sugarcane is shaved or false shaved, the application of silvex should be made immediately after shaving.

b. After the sugarcane is fertilized and the rows are rebuilt, apply 4 lb./A of TCA plus 1/2 to 1 lb./A of silvex. One application after fertilizing is usually sufficient. In some cases a repeat application of 2 lb./A of TCA plus 1 lb./A of Dowpon plus 1/2 lb./A of silvex should be made.

2. Terbacil (Sinbar) Program. 1/2 lb./A should be applied to a mechanically or chemically cleaned row after the row is off-barred and rebuilt.

3. Fenac, Fenacplus and Trifene Program. Apply either 2 quarts of fenac plus 1 quart of silvex, or 2 quarts of Fenacplus or 1 1/4 quart of Trifene plus 1 quart of silvex to a mechanically or chemically cleaned row after off-barring and rebuilding of the row.

Note: Fenac, Fenacplus and **Trifene** are registered for use on plant sugarcane but are not registered or labeled for use in stubble sugarcane.

RAOULGRASS

Raoulgrass is known to occur in several of the sugarcane growing par-

(Continued on next page)

ishes. The growth of this plant is different from Johnsongrass in that it grows from seed only and does not reproduce from rhizomes. One of the first steps in controlling this weed is to reduce the population of seed in the soil. This can be done by fallow plowing before sugarcane is replanted, and by eradicating plants from ditchbanks and other non-cropped areas by chemical or mechanical means. Secondly, all newly planted sugarcane should be treated with a herbicide. These herbicide treatments should be supplemented with hand-hoeing and/or flaming during the growing season. Growers should strive to eradicate this weed from their property.

1. TCA Program for Plant and Stubble Sugarcane

a. Apply 4 lb./A of TCA plus 1 lb./A of silvex to a clean row early in the spring.

b. Approximately four weeks later or after fertilization **repeat** this treatment, or if Raoulgrass is growing, apply a mixture of 2 lb./A of TCA, 2 lb./A of Dowpon, and 1 lb./A of silvex as a **directed** spray.

c. A lay-by application may be desirable in heavily infested areas. A broadcast application (**directed** to the base of the cane and middles) of a mixture of 12 lb./A of TCA and approximately 2 lb./A of amine 2, 4-D should be made immediately after the lay-by cultivation.

2. Trifluralin (Treflan) Program for Plant Cane

a. Apply trifluralin at 0.8 lb./A (1 2/3 pints) on a band 30 inches wide on a **clean** drill before or shortly after cane emerges. Immediately incorporate with a rolling-cultivator implement set to cut 2 to 3 inches deep. Carefully adjust the implement so that it mixes the soil without injuring sugarcane excessively. If beds are packed hard, loosen the soil with the rolling-cultivator prior to the application and final incorporation of trifluralin.

b. If control weakens during late spring, treat Raoulgrass plants while small with a **directed** application of Dowpon at 2 lb./A. If broadleaved plants are also a problem, apply silvex at 1 lb./A alone or in a mixture with Dowpon.

BERMUDAGRASS

Fields infested with Bermudagrass (blue or wire grass) should be sprayed with two applications of a mixture of 2 lb./A of TCA plus. 1 lb./A of Dowpon plus 3/4 to 1 lb./A of silvex.

EQUIPMENT AND APPLICATION

Most herbicides used in the sugarcane belt during the past several years have been water-soluble compounds; therefore, spray equipment with ordinary by-pass agitation could be used effectively. However, terbacil (Sinbar) is a wettable powder and vigorous agitation must be provided during mixing and spraying to keep this herbicide in suspension. Mechanical agitation or sufficient by-pass agitation must be provided to insure proper application.

Sinbar should be applied in 12 to 15 gallons of water per acre (on the drill). Less volume may cause nozzle clogging and unnecessary delays in the field.

Quantity of two commercial formulations required to give a specific rate of fenac.

Pounds of fenac per acre	Volume per acre for each product	
	Fenac[1]	or Fenacplus Trifene[2]
2.1	5½ qts.	3½ qts.
1.9	5 qts.	3 qts.
1.5	4 qts.	2½ qts.
1.1	3 qts.	2 qts.
.8	2 qts.	1¼ qts.
.4	1 qt.	1¼ pts.

[1]Sold by Amchem Products, Ambler, Pa.; contains 1 1/2 pounds of fenac per gallon.

[2]Sold by Tenneco Chemicals, New York, N. Y., contains 2 1/2 pounds of fenac per gallon.

Chemicals Referred to in the Recommendations

Common Name	Chemical Name
2, 4-D	amine or low volatile esters of 2, 4-dichlorophenoxyacetic acid
Dalapon (Dowpon)	sodium salt of 2,2-dichloropropionic acid

A SIMPLE METHOD FOR CHECKING INTERNAL TEMPERATURE DURING HOT-AIR TREATMENT OF SUGARCANE

Hideo Koike and G.T.A. Benda[1]

The hot-air treatment of sugarcane or the control of ratoon stunting disease has become standard practice in Louisiana since Abbott reported presence of the disease in the state in 1953 (1). Large electric ovens (2) are widely used. The recommended treatment time is 8 hours with an air temperature of 54°C. This requires a temperature in the inlet duct of 57°C to 59°C. The internal temperatures of the sugarcane stalks within the oven adjusted to these temperatures will be between 50°C to 54°C for the last 2 to 3 hours of operation (3).

The hot-air treatment of sugarcane inactivates the virus only if the inside of the cane is heated to the indicated temperatures. Hot-air ovens may be ineffective even though the heating coils and blower function well, the temperature at the inlet and outlet ducts are as recommended, and the cane is loaded to permit good air circulation. Effective heat-treatment requires the heat within the oven to be evenly distributed by the baffles, without hot areas or cold areas. Hot areas lower germination and cold ones cause the treatment to be locally ineffective.

There has been a definite need for a routine method of checking the internal cane stalk temperature, so that uneven distribution of heat in the oven may be detected. The heat-sensitive indicators described in this paper will provide a simple, reliable, and inexpensive method of determining whether an oven needs adjustment. The adjustment itself requires the use of thermocouples.

The Material: Temperature indicators are available 2 that consist of calibrated melting point resins suspended in volatile solvents and that are applied like paint. These colored indicators melt at any temperature equal to or higher than their melting point; once melted, they change their appearance irreversibly from the original dull and opaque to glossy, crystalline, fused-looking, or transparent. For example, if the temperature reaches 50°C, the indicator for that temperature will melt, but the indicators for the higher temperatures (e.g. 52°, 55° and 59°C) will not melt. Upon cooling the 50°C indicator will appear glossy, fused-looking and smeared at the

(Continued on next page)

[1]Research Plant Pathologist and Plant Physiologist, respectively, U.S. Sugarcane Field Station, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana 70360.

WEED CONTROL

Fenac (Fenac or Trifene)	sodium salt of 2, 3, 6-trichlorophenylacetic acid
Silvex	low volatile esters of 2-(2, 4, 5-trichlorophenoxy) propionic acid
TCA	sodium salt of trichloroacetic acid
Terbacil (Sinbar)	3-6456-butyl-5-chloro-t-methyluracil
Fenacplus	dimethylamine salt of 2, 3, 6-trichlorophenylacetic acid plus 1 pound of dimethylamine salt of 2, 4-D
Trifluralin (Treflan)	**a,a,a**-trifluoro-2,6-dinitro-**N,N**-diproply-p-toluidine

[2]In our trials we used TEMPILAQ (Tempil Division, Big Three Industrial Gas and Equipment Co., 132 West 22nd Street, New York, New York 10011).

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edges. The indicators for higher temperatures will be unaltered, except for slight changes in color. Temperature indicators show the maximum temperature reached; as the indicators respond quickly, the duration at this temperature cannot be determined directly.

The Method: The indicators must be protected from moisture and from contact with materials that will plasticize upon heating (e.g., polyethylene). For their application to sugarcane problems, the indicators should be on a pliable, transparent surface. To meet these requirements, indicator strips (Fig. 1) are prepared.

Each indicator is painted separately as a band, approximately a half-inch wide, onto a mylar surface. After the indicator has dried (about 5 min.), a 3/4-inch square of the mylar with the indicator is cut and is covered with another piece of mylar of the same size; i.e., the indicator is sandwiched between mylar surfaces.

Mylar sandwiches of indicators for 50°, 52°, 55°, and 59°C are placed in separate compartments of a polyethylene jacket of approximately 4½-inches in length and 1-inch in width. The edges of the jacket are then carefully heat-sealed. The jacket with its enclosed mylar sandwiches of indicators is called an indicator strip (Fig. 1).

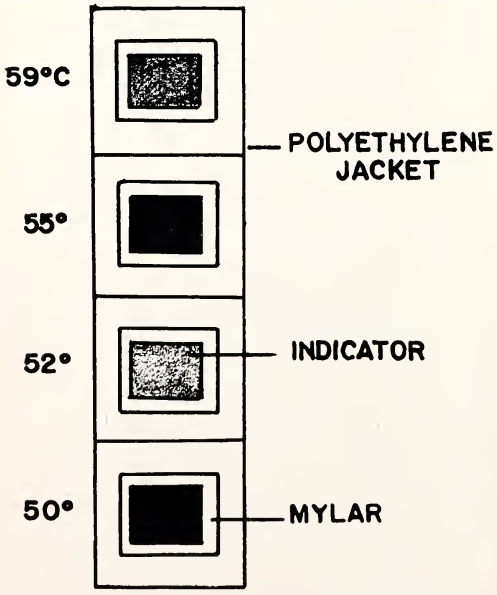

Fig. 1 The indicator strip composed of mylar sandwiches of indicators for different temperatures in separate compartments of a polyethylene jacket.

The sugarcane stalk is split lengthwise from the end, through about two nodes, and the indicator strip is inserted. The indicator strip is so placed in the internode that none of the strip protrudes outside the rind (Fig. 2 A). After the strip has been placed inside, the halves of the split end are tied together firmly with cord and marked with colored surveyor's tape (Fig. 2 B).

These marked stalks are distributed evenly in the oven. Short stalks of cane are used for testing the temperatures in the center portion of the racks.

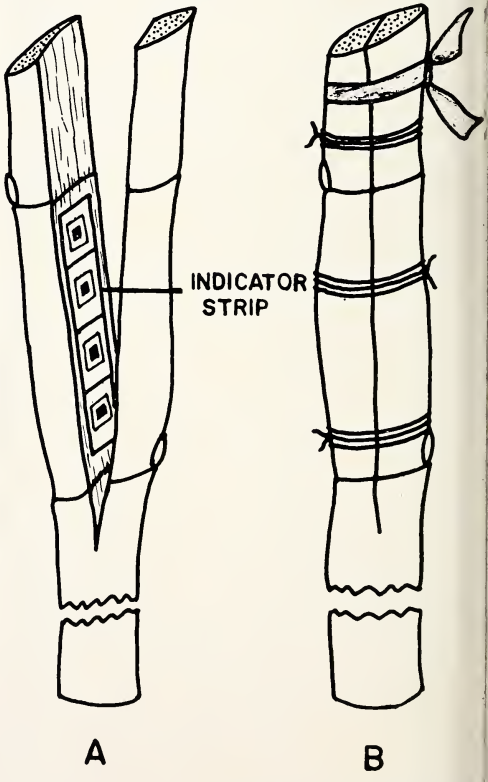

Fig. 2. A) A stalk of sugarcane split at one end with the indicator strip inserted and then B) tied with pieces of cord and marked with ribbon at the split end.

CHECKING

Air temperatures within the oven can be checked by leaving the indicator strips outside the stalks.

After the heat treatment is completed, the cane is allowed to cool, the indicator strips are removed and compared with unheated ones. In a correctly adjusted oven, the 50°C indicator should be melted, the 52°C may or may not be melted, and the 55° and 59°C indicators should not be melted. The oven requires adjustment: a) if none of the indicators are melted; b) if the 50°, 52° and 55°C indicators are melted; c) if all the indicators are melted.

The method may also be useful in the hot-water treatment of sugarcane.

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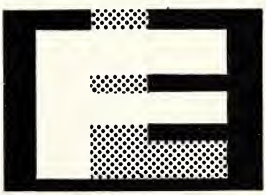
2. Used AC HD11B-E Tractor, s/n 1829, 11HA Angle Dozer Blade, 22" Shoes, Canopy.
   Condition Fair—Baton Rouge, La.
3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.
4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.
5. Used AC HD16DC, s/n 6040, 24" Shoes, New Canopy, 16HS Straight Bulldozer Blade.
   Condition Good—Baton Rouge, La.
6. Used John Deere Pull type Tow Tractor, Rubber Tired, Diesel Engine, Drawbar.
   Condition Good—Baton Rouge, La.
7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11363, GM 3-53 Diesel Engine, 24" Shoes, 25' Boom, Fairlead.
   Condition Good—New Orleans, La.
9. Used Koehring 205 Dragline, s/n C11327, GM 3-71 Diesel Engine, 24" Shoes, 35' Boom.
   Condition Good—Baton Rouge, La.



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THE SUGAR BULLETIN

Vol. 48—No. 10 FEBRUARY 15, 1970

ial Bulletin of the American Sugar Cane League of the U. S. A.

FERTILIZER RECOMMENDATIONS FOR LOUISIANA SUGAR CANE, 1970

Laron E. Golden, Ray Ricaud and Denver T. Loupe[1]

Plant Cane

For plant cane, use 80 to 120 pounds of N per acre by applying any of the common N materials. Where available soil P and/or K are "low", use 40 pounds of P_2O_5 and/or 80 pounds of K_2O per acre from either soil or liquid sources.

Stubble Cane

For stubble cane, use 120 to 140 pounds of N on coarse-textured (light) soils, and 140 to 160 pounds of N on fine-textured (heavy) soils. Any of the commonly available sources of N may be used. In experiments with rates of N higher than 160 pounds per acre some increases in cane yield have been obtained, but sugar per ton of cane has been depressed except where K_2O was also used.

For stubble cane on Mississippi Recent alluvial soils, use 40 pounds of P_2O_5 per acre where soil tests show the available soil P to be no higher than the upper limit of the "medium" range. In some areas on alluvial soils, particularly on fine-textured soils, profitable increases from use of 40 pounds of P_2O_5 per acre have been obtained when soil tests for available P have been "high". When soil tests show the available oil K to be no higher than the intermediate level of the "medium" range, apply 80 pounds of K_2O per acre.

For stubble cane on the coarse- to medium-textured soils of the Mississippi terrances west of Bayou Teche and the older alluvial soils generally along Bayou Teche, use 40 pounds of P_2O_5 and 80 pounds of K_2O per acre. On fine-textured soils, use results from local fertilizer experiments and soil tests as guides for use of P and K.

Split applications of N to stubble cane, where 120 or more pounds of N are applied by ground and/or aerial means, are beneficial in many cases. If the second application is made as late as July 15, satisfactory sucrose may be obtained by harvesting at a date later than normal.

Seed Cane

For seed cane, use fertilizers at or near the highest levels within rates recommended.

Lime Requirements

Where the soil pH is below 6.0, lime should be used according to soil test recommendations.

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THE
SUGAR BULLETIN

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Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN THE FIELD WITH LLOYD L. LAUDEN

LOUISIANA STATE UNIVERSITY LIBRARY

By Lloyd L. Lauden

County Agents Meetings

Many County Agents have already started holding their early year meeting to discuss the chemical weed control program, fertilization and other practices. Speakers at these meetings in addition to the County Agents, include the many scientists working on the problems of sugar cane. These meetings are very informal with plenty of opportunity for growers to ask questions about their problems. Although these meetings are well attended, the attendance, in general, is not too large and composed of growers from the immediate area which makes for a good question and answer session.

These type meetings have played a very important role in the recent trend toward higher yields of cane per acre for the State. For growers' convenience, many of these meetings are held at night and usually in comfortable quarters. The writer, over the years, has noticed both an increase in the number of growers in attendance as well as in the number of meetings of this kind. In addition, it has been noticed that many of the growers in attendance produce high yields of cane per acre. It is difficult to say whether it is the information received at these meetings that has lead to high production or whether high producers come to learn how to produce even more. Nevertheless, all growers can learn something new at these meetings. Not only can something be learned from the County Agents and other speakers, but growers can learn from each other. There is another good that can come from these meetings. Research workers can be inspired toward experimental work aimed at solving problems called to their attention. In addition, these type meetings bring research workers, County Agents, and growers close together in a spirit of friendship and mutual interest. This type relationship is good and it is paying dividends now. Growers who are not taking advantage of these meetings are missing out on a good thing.

There are many other sugar cane information type meetings that take place throughout the cane belt all during the year. These meetings are generally free. There are only a few in which there is a small registration fee charged and these fees are usually charged to help defray the cost of a barbeque or lunch served in conjunction with the meeting.

Of interest is a new group of young sugar cane growers now called The Young Peoples Sugar Association who, on two occasions in the past, have asked the League to hold meetings to give them information. In July of 1969, this group asked the League to discuss, in detail, the U. S. Sugar Act and how it is worked. A full day's program was arranged for the group. Mr. W. S. Chadwick, then Chairman of the League's Legislative Committee, Mr. Clay Terry, Chairman of the League's Proportionate Shares Committee, Mr. Glenn Timmons, League Economist, and Mr. Gilbert Durbin, Vice-President and General Manager of the League, gave talks on the Sugar Act and how it operates. According to the speakers at the July 1969 meeting, this group was very interested and wanted

(Continued on page 133)

IN WASHINGTON WITH HORACE GODFREY

By Horace Godfrey

Speech By Senator Ellender—

"Farm Programs and The Economy"

On January 27, 1970, Senator Allen Ellender, Chairman of the Senate Agriculture and Forestry Committee made an outstanding speech on the floor of the Senate on "Farm Programs and the Economy." Space will not permit his entire speech to be covered in the Bulletin but highlights from the speech are quoted below: *

"Today, and during the past few years, there has been a stepped-up clamor that farm programs be abandoned. On the one hand it is the consumer reacting to higher prices for beef steaks, not realizing that demand for beef is higher than ever before or that the family is now spending only 16.5 per cent of its take-home pay for food, a smaller percentage than ever before. I may interpolate, no price supports are provided for beef. Or it is the taxpayer, accepting without adequate examination the oft repeated statement that farms programs are bad because of the cost. Those attitudes are extremely unfortunate. They are not based on careful examination and analysis of the real problems which exists." . . .

. . ."In brief, we are talking about what are generally referred to as price and income support policies, expressed in such programs as price supports, stock accumulation, compensatory payments, acreage restrictions, and perhaps multiple pricing, both at home and abroad. ". . ."One of the very first thoughts which must occur to any of us who consider the problems involved in abandoning farm programs is the question of what such action will do to farm incomes."

. .."The following item from a recent Legislative Reference Service statement appears approximately correct:

Government payments to farmers under the price support and adjustment programs totaled $3.5 billion in 1968 and will total about $3.7 billion in 1969. These payments are made for two basic purposes: (1) to effect desirable resource adjustments (Supply Management), and (2) to supplement farm income while permitting price support loan levels to reflect world price levels.

Even in this rather good year of 1969, to eliminate government support and thus reduce the realized net farm income by $3.7 billion from its approximate level of $16 billion would be a cut of fully 20 per cent. Such a cut must be regarded as total loss." . . .

"I shudder to recall the severe dislocations, the dire distress which occurred not only in my farming areas but all over the country after World War I. Realized net income of U. S. farm operators declined from about $9.5 billion in 1919 to about $3.9 billion in 1921." . . .

"Commonsense tells us that any producing group which buys about $37 billion in production goods per year is an important factor in our general economy. The commercial farmer buys about 5 per cent of our total steel production, about $1.6 billion of our petroleum products or 11 per cent of the total sold. He buys a lot of rubber for his cars and tractors. It is estimated that his purchases are the basis for about 6 million jobs in machinery, chemical and other supply industries. In turn, his products are the basis for processing and marketing industries which provide an estimated 14 to 16 million jobs." . . .

"I wish to cite other figures in addition to the ones I referred to before. In 1947 the realized gross farm income was $34.146 billion. The production expense was $17.032 billion, and the realized net income was $17.114 billion. In 1968 the realized gross farm income was $51 billion, and the net production expense was $35 billion,

(Continued on next page)

THE WEST INDIAN SUGARCANE FULGORID IN LOUISIANA

Leon J. Charpentier, Research Entomologist,
Entomology Research Division, Agr. Res. Serv., USDA 70360

The West Indian sugarcane fulgorid, **Saccharoydne saccharivora** Westwood, a sucking insect that feeds on sugarcane, was found in Louisiana in the fall of 1969 for the first time in 13 years. Previous records of the insect in Louisiana were in December 1944 and again in 1956, when only a very light infestation in a small cane planting at Grand Isle was recorded. First signs of the 1969 infestation were observed in an insecticidal control of the borer experiment in St. Mary Parish.

Surveys to determine extent of the fulgorid infestation were subsequently made in 16 sugarcane producing parishes. One sample consisting of 150 row feet of cane taken at random in each of 5 fields, in each parish, was examined. Parishes and number of fields found infested follow: Ascension—4, Assumption—5, Iberia—2, Iberville—2, Lafayette—4, Lafourche—3, Point Coupee—2, St. James—2, St. John—3, St. Martin—2, St. Mary—4, Vermilion—2, and West Baton Rouge—3. The insect was found in 13 of 16 parishes and in 38 of 80 fields examined. The heaviest and most widespread infestations were found in the western area of the Cane Belt. The fulgorid was found in all 5 parishes and in 14 of 25 fields examined in that area. No signs of the insect were observed in Avoyelles, Rapides, and Terrebonne Parishes. In Lafourche, it was not found south of Thibodaux. The apparent widespread infestation indicates that the fulgorid may have been in Louisiana for some time and went undetected until 1969.

Box (1953) lists the West Indian sugarcane fulgorid as a pest of sugarcane in Antiqua, Barbados, Cuba, Grenada, Guadeloupe, Haiti, Jamaica, Puerto Rico, Trinidad, U.S.A., and Venezuela. It has been reported as causing various degrees of injury in the more tropical areas of the Caribbean, Central and South American sugarcane producing areas (Guagliumi, 1953). Metcalf (1943) reported it as the only one of seven species of **Saccharosydne** that breeds on sugarcane. The fulgorid was first found injuring cane in southern Florida in 1936, southern Georgia in 1939, and Mississippi in 1944. As far as is known it has not been reported in the continental United States elsewhere than in the southern portions of Florida, Georgia, Louisiana, an Mississippi except that a single specimen labeled "Houston, Tex., June 11, 1937" is in the U. S. National Museum collection (Ingram, et al., 1943).

The adult fulgorid is about 1/5 inch long, pale green with transparent wings. It often bears a white cottony fluff at the rear end of its body. The translucent white elongated oval eggs, about 1/25 inch long, are deposited in batches of 4-12 in a row side by side in slits on the underside of the midrib of cane leaves. Wolcott (1921) reported that as many as 200 eggs may be deposited by a single female during a 3-week period. The slits are covered with a little tuft of white cottony fluff. The nymphs, or immature insects, are yellow in the first stage and later become green. They bear a characteristic long tail-like filament at the end of their bodies. After hatching the nymphs usually remain feeding on the leaf in which the eggs were deposited. The adults often stay with the

---

so that there was only $14 billion of realized net income." . . .

. . ."Those figures demonstrate that the cost of producing has so increased that the farmer of today is simply not making as much money as before because of the price squeeze."

* * * *

*The complete text of Senator Ellender's speech can be obtained from this office upon request. See inside cover of Bulletin for address.

nymphs and are nearly always found on the underside of the leaves. They are sometimes present in the central whorl but rarely on the upper leaf surface. In 1958, the late D. D. Questel, U. S. Department of Agriculture, reported that it was not uncommon in Florida to find fields of plant or ratoon cane less than 18 inches in height as averaging 25 or more fulgorids per plant, congregated in the plant whorls.

Although the fulgorid appears to be strictly a pest of sugarcane, Fannah (1969) reported that it has been observed occasionally on other grasses including Rie Grass (**Sorghum valgare**) in Jamaica, **Paspalum distichum** in Grenada and **Digitaria sanguinalis, Dactyloctenium aegyptium** and **Paspalum urvillei** in Florida. Louisiana during 1969, all stages of the fulgorid were observed on johnsongrass, **Sorghum halepense** (L.) Pers. The infestation in some fields was equally as heavy on johnsongrass growing in canefields as on sugarcane, indicating that this plant could be one of its favorite hosts in Louisiana.

Sugarcane is subject to attack at all stages of growth and damage may be severe. The fulgorid causes direct injury by sucking juice from the cane leaves. Red rot develops in the oviposition slits and infested leaves wilt and dry out. On mature cane damage becomes evident only under conditions of heavy infestations. Droppings of honeydew form a medium for development of sooty mold on the leaves. In the West Indies, it was formerly called "black blight" because of the mold associated with it. Guagliumi (1953) states that in Venezuela outbreaks are confined to small areas and occur in the dry season (February - May). They terminate at the onset of the rains but may recur on a minor scale in October and November.

Injury by the fulgorid in Louisiana to date has been of uneconomic importance. Severe injury to sugarcane by this pest in Florida as first reported by Strong (1937). Ingram, et al., (1951) reported that in the fall of 1936 at Fellesmere, Florida, fields of Co. 290 cane were damaged more by this insect than by any other. It was estimated that at least a 10 per cent crop loss could result from the withering and dying of leaves, mold growing in the honeydew given off by the fulgorids and red rot entry through oviposition slits. Although other fairly heavy infestations have been observed in both the Fellsmere and Lake Okeechobee areas the injury was usually light or negligible. In Louisiana, the heaviest infestations were on young tillers in fields of mature cane and on young cane growing in fields that had provided seedcane for fall plantings.

Varietal differences in susceptibility of cane varieties to fulgorid attacks have been recognized in different countries. In Jamaica, Gowdey (1927, 1928) reported that varieties B. H. 10(12) and White Transparent were seriously retarded following heavy fulgorid attacks whereas other varieties including Ba. 11569, Badila, and Uba were only slightly affected. In an outbreak in Florida, Co. 281 sustained only slight injury whereas in some nearby fields of Co. 290 damage was serious. Ingram, et al., (1939) reported a preference on the part of the fulgorid for broad-leaved varieties and concluded that varieties with most wild blood (**Saccharum sinense** or canes of a low degree of nobilization) were those least susceptible to attack.

Although the West Indian sugarcane fulgorid appears to be well established in Louisiana it is unlikely that it will ever become of much economic importance. In Florida, 1959, D. D. Questel, U. S. Department of Agriculture, screened the fulgorid as a potential vector of sugarcane mosaic an ratoon stunting diseases of sugarcane with negative results. It is possible, of course, that the insect may occasionally cause some damage in susceptible varieties during seasons of extended droughts. Chemical control of the sugarcane borer in Louisiana could enhance fulgorid multiplication by killing its natural enemies such as the yellow sugarcane aphid (**Sipha flava** Forbes) following the use of carbaryl (sevin). Also, the effectiveness of parasites that

(Continued on next page)

keep the insect under control in the tropics and southern Florida remains to be seen. Parasites of the sugarcane borer are considerably less effective in Louisiana than in the tropics. Nymphal stages of the fulgorid were recorded in the western part of the Cane Belt about 2 weeks following the November 15, 1969 freeze of 22 degrees F., an indication of its ability to survive the Louisiana winters.

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1. Used Cat 12 Grader, s/n 81-9255, 2-10:00 x 24 (8 Ply) Tires, 4-13:00 x 24 (10 Ply) Tires.
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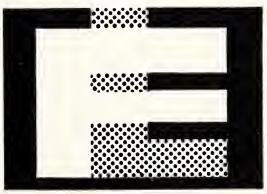
   Condition Fair—Baton Rouge, La.
3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.
4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.
5. Used AC HD16DC, s/n 6040, 24" Shoes, New Canopy, 16HS Straight Bulldozer Blade.
   Condition Good—Baton Rouge, La.
6. Used John Deere Pull type Tow Tractor, Rubber Tired, Diesel Engine, Drawbar.
   Condition Good—Baton Rouge, La.
7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11363, GM 3-53 Diesel Engine, 24" Shoes, 25' Boom, Fairlead.
   Condition Good—New Orleans, La.
9. Used Koehring 205 Dragline, s/n C11327, GM 3-71 Diesel Engine, 24" Shoes, 35' Boom.
   Condition Good—Baton Rouge, La.



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NEW AND USED EQUIPMENT—PARTS—SERVICE—RENTALS

THE SUPPLE SYSTEM, A NEW ALTERNATIVE FOR CANE HANDLING ON THE MILL YARD

Glenn R. Timmons, Economist, American Sugar Cane League

In the next few years many of the sugar mills in Louisiana will have to make a decision concerning replacement of yard derricks. Until last year there were only two choices. Old derricks could be replaced with new derricks, or they could be replaced with bridge cranes. There is now a third choice called the Supple System.

What Is The Supple System

The Supple System is a new method of handling cane on the mill yard that may eliminate derricks at some mills. This system was first put into use by Mr. Ed Supple of Catherine Sugar Factory in Bayou Goula, Louisiana. He experimented with the new method in 1968, and put it into full practice in 1969. Since Mr. Supple was the first to adopt this new system of cane handling, I feel that it should bear his name.

The Supple System substitutes a heavy-duty, articulated tractor, commonly known as a payloader, for each derrick. As you know, payloaders normally have a bucket attached to the front of the machine, and are used to move soil, sand, shells, raw sugar, etc. Mr. Supple had a specially designed cane grab mounted on the payloader in place of the bucket. The lower tines of this grab are rigid, and the upper tines can be opened and closed with hydraulics.

With the Supple System, bulk cane is delivered to the mill in carts or trailers. It is dumped over a retaining wall onto the storage pad. The payloader-operator lowers the machine's lifting arms to place the grab on or near the ground. The upper tines of the grab are opened. The operator drives the machine toward the unloaded cane and pushes the grab tines into the pile of cane. When the grab is full, the operator closes the upper tines of the grab, compacting and holding the cane inside the grab.

The operator raises the grab into the air and backs away from the unloading station. He now has the option of either placing the cane in a storage pile or onto the feeder table.

The machine used at Catherine Factory was able to lift a grab full of cane nine feet nine inches above the ground. This was sufficient to stack the cane to an average height of eight feet all across the storage pad. Cane could also be placed on the feeder table with no difficulty. If additional height is required, longer lifting arms could be installed.

Since 1969 was the first time the Supple System was actually used to feed a mill, no cost data was available on the system. Also, there was no physical performance data available from any source concerning this machine's capacity in cane handling. For that reason, the American Sugar Cane League, at Mr. Supple's request, conducted a study of this new system during the 1969 season.

I would like to report the findings of that study at this time. The figures presented are the result of numerous observations, weighings, and timings throughout the 1969 season at Catherine and Cinclair Factories. It was originally intended that this study would make comparisons between the Supple System, the derrick system, and the bridge crane system. However, because of the unusually short grinding season in 1969, not enough data was gathered on bridge cranes to accurately compare them with the Supple System. For that reason, the only comparison made will be between the conventional derrick system and the Supple System.

The first problem was to determine the work standard for the machines used in the Supple System. Each pay-

loader with it's special cane grab was able to consistently lift one cart full of cane per grab full. During 1969, the average cart load of cane delivered to Catherine Factory contained 4.5 tons of cane. This meant that the payloader picked up an average of 4.5 tons of cane per grab full.

The cycle time was next determined. This is the time required by the payloader to pick up a load of cane and either place it in storage or on the feeder table and return for another load. This operation was timed a minimum of three hours per day for ten days. The average cycle time during that period was one minute twelve seconds. This held true for cane being placed either in storage or fed to the mill.

If each machine moved 4.5 tons of cane every one minute twelve seconds, then each machine was operating at an indicated capacity of 3.75 tons per minute or 225 tons per hour. This is the amount of cane each machine could handle if it were operated one hundred percent of the time, which is not realistic. By comparison, a derrick with a 12 ton grab and an 80 foot boom had an indicated capacity of 250 tons per hour. At Catherine Factory each machine ran 16 hours per day. It was not moving cane all this time. The other 8 hours of the day was available for preventative maintenance, refueling, and repairs. This is more than enough time to complete these duties.

It was found that both derrick and payloader was actually moving cane only 40 minutes out of each hour, or two-thirds of the time, therefore the indicated capacity of both derrick and payloader was adjusted by two-thirds. This gives a work standard of 150 tons per hour per payloader and 167 tons per hour per derrick. The work standard is that amount of cane that a machine can be expected to handle per hour over a long period of time. Each machine in the Supple System could reasonably be expected to handle 150 tons per hour and work an average of 16 hours per day.

One experience last year indicates that this work standard for the Supple System is reasonable. This experience is best explained in the following excerpt from a letter from Mr. E. Berkshire Terrill, Manager of Cinclair Factory to Ed Supple.

. . . As you know, in the early hours of the morning on December 4th, we broke a head shaft on our West Cane Table. This cane Table handles the delivery of all of our bulk cane trailers. We realized that we were faced with a twenty-four to thirty-six hour repair job on this Cane Table and knew that we only had about forty-eight hours of grinding left for this crop year. A phone conversation to you around breakfast time advised us that you would be more than glad to loan us your Hough Front End Loader to help out. Our plan then was to unload all of the bulk cane with the Hydrunloader over the wall on our West yard and have the Hough Front End Loader take this cane over to our East derrick yard, where the derrick could put it on the East table. Your loader arrived around noon that day and at that time we decided instead of taking the cane from the West yard to the East yard, that we would transfer the cane from the West yard to an empty railroad car and have our railroad grab unload this cane on to the East table. This worked out extremely well. During the night of the 4th we broke a shaft on the East derrick. This of course meant that we had nothing to feed either table with, and only had the railroad cars to operate the factory on. The next morning we took the grab off of the West derrick and put a bar on the cables so that we could unload sling cane on that yard. We went the full day unloading sling cane on to the West yard and unloading bulk cane over the wall with the Hydrunloader on to the West yard. For your information, The Supple System completely took care of feeding the mill and we were at that time grinding at a 3,000 plus ton rate. . . .

This illustrates the flexibility of the Supple System. While operating one machine, under adverse conditions, the Supple System moved cane at an average of at least 125 tons per hour.

(Continued on page 128)

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SUPPLE

(Continued from page 125)

Storage Requirements

When the Supple System was first introduced, storage requirements were unknown. Some felt that any mill adopting this new method would have to triple existing storage space. The League study did not bear this out. However, an increase in storage area would be required at some mills. This did not happen at Catherine, and I can not visualize any mill having to triple existing storage areas.

A derrick will stack cane much higher at a given point and denser than the Supple System, but it does a less efficient job of using available concrete space. A derrick does not use a large portion of the concrete area under the boom for several reasons. Cane is stacked in a doughnut-shaped plie because the center of the storage pad must be left clear in order for the derrick housing to pivot. Cane cannot be piled too high either in front of the feeder table or near the unloading station. In addition, a lane is generally kept open in case maintenance vehicles are needed at the derrick.

By contrast, the Supple System makes better use of existing storage area. By actual measurement, the Supple System at Catherine Factory stacked cane to an average height of eight feet across the storage pad. The amount of cane stored on the yard at Catherine Factory during one day was 1,846 tons. This amount of cane occupied 32,870 square feet of storage space. Since the cane was stacked at an average height of eight feet, the Supple System piled cane at a rate of 14 pounds per cubic foot.

The Spencer Meade, Cane Sugar Handbook, Ninth Edition states that the average bulk density of cane in a pile can vary from 25 pounds per cubic foot to 12 pounds per cubic foot. The Supple System falls within this range.

To illustrate the storage requirements of the Supple System as opposed to the conventional derrick system, a hypothetical mill situation is assumed. The yard layout is shown in figure 1. In our example, land is not a limiting factor.

The mill has two conventional derricks, one a 60' boom and the other an 80' boom. The big derrick could stack 1500 tons of cane for night grinding, but normally stacks only 1250 tons. The smaller derrick could stack 800 tons, but it normally stacks only 500 tons of cane.

In addition to the derricks at our mill, we also direct feed during delivery time. Direct feeding normally accounts for 3/4 of our hourly grinding rate during delivery time. The rest of the grinding needs are supplied by the derricks.

In its present condition our mill has 20,106 square feet of concrete under the large derrick and 11,310 square feet under the small derrick. All of this concrete is not available for cane storage for reasons mentioned previously.

Both derricks at our hypothetical mill are old and in need of replacement. For that reason, the decision has been made to study both the Supple System and the conventional derrick system as both would apply to our mill.

We know from data collected at Catherine Factory in 1969 that the Supple System will stack 14 pounds of cane per cubic foot. Since we want to be able to stack up to 2,300 tons of cane we can easily compute the required storage area.

Using 14 pounds per cubic foot and an average stack height of eight feet, we compute that our mill will need 41,071 square feet of actual storage space to stack 2,300 tons of cane. The proposed yard layout with the Supple System is shown in Figure 2. In addition to storage, an operating lane 25 feet wide is provided on each pad for each machine. This operating lane runs the complete width of the storage pad directly in front of the feeder table. In addition, one pad has another 25-foot wide lane to accommodate direct feeding of the mill. The only equipment change required would be swapping payloaders for derricks.

The total increase in storage pad (includes operating lanes) requires an ex-

(Continued on next page)

pansion of 63% in existing storage pads.

In this example, changing from a derrick system to the Supple System requires an additional 19,744 square feet in concrete. 8,584 square feet of the increase is realized by squaring off the corners of the existing round pads. Some mills may have this additional concrete available but unused because of the circular storage required by a derrick. It is important that all the concrete the machine will operate on be reinforced-concrete, poured on a well drained base. Following is the type of slab-construction recommended by L.S.U. engineers for the Supple System.

One foot of river sand used as a base. Concrete used is a mixture of cement, sand and gravel in a ratio of 1:2:3 respectively. No more than 6 gallons of water per sack of cement is used. Reinforcement is achieved with 3/8"rods . Slab is poured in sections not more than 20 feet square. Curing is the wet process for 25 days at 70° Fahrenheit.

Handling Capacity

Assume that our hypothetical mill grinds 3,000 tons per day. If cane is delivered 10 hours per day, then it comes into the mill yard at a rate of 300 tons per hour. During delivery time, 94 tons per hour is dumped directly onto the feeder table. The payloaders supply the additional 31 tons per hour to feed the mill. In addition they add 175 tons per hour to storage. Therefore, each payloader will have to handle 103 tons per hour which is 69% of the work standard established for each machine.

Once deliveries have been completed, the work load on each machine becomes one-half the hourly grinding rate of the mill. In our example, this is 62.5 tons per hours. This represents only forty-one per cent of the work standard established for each payloader.

Since each machine will work at 69% of its established work standard during delivery hours and only forty-one per cent the rest of the time, a back up machine will not be purchased. It is felt in our example, that since one machine can actually feed the mill and still store twenty-five tons per hour during delivery time, the excess capacity is in effect a back up.

Since our mill dumps direct on the feeder table during the day, the mill could actually grind more cane per day if cane were available and the payloaders could be used to do nothing but build up storage. Assuming that each machine achieved its work standard of 150 tons per hour, then 3,000 tons of cane could be stockpiled in a normal ten hour delivery period. If this cane were ground over a fourteen hour period, the capacity of our mill could expand up to 5,000 without exceeding the work standard of the Supple System. However, this would require further expansion of storage area and at least one back up machine.

The hypothetical 3,000 ton mill is used to illustrate several points concerning the physical characteristics of the Supple System. Storage space is not as limiting as was once thought. The machines used in the Supple System have greater capacity than initially expected. With proper yard layout and the average operator, the work standard of 150 tons per hour during a 16 hour day can be achieved.

In figure 2 we have allowed a lane 25 feet wide on each storage pad for operation of the machine. Each machine has articulated steering, is nine feet wide and can turn around in an area twenty-two feet by twenty-two feet. Therefore this operating lane should be adequate. It is important that the operating lane occupy as little of the storage space as possible. For that reason the dumping station should be as close to the feeder table as possible.

Cost Of The Supple System Versus Conventional Derrick System

We have seen that there is no physical limitation that would rule out the introduction of the Supple System at our hypothetical 3,000 ton mill. Next, and most important, we must look at the cost of the Supple System versus another derrick system.

The installed cost of one new 6-ton

(Continued on next page)

capacity, guyed, steel, AC-DC individual motor drive derrick with a 60 foot boom including paved unloading site and derrick stand (see table 1) is $125,000. A similar derrick with an 80' boom and 12 ton capacity cost $137,500, (Table 2). These figures were arrived at through discussion with mill managers who have both purchased and priced similar derricks recently. This is the complete cost to the mill of an installed derrick. These derricks would have a 20 year life. Beyond this period it would be more economical to replace the original derrick because of increasing maintenance costs.

The combined annual depreciation of both derricks is $13,125.00. Since money used to purchase these derricks cannot be invested in other profitable areas of mill operation, an interest rate must be charged to this investment. This is true whether money is borrowed or not. The interest rate assigned in this case is 7%. Assuming straight line depreciation of all equipment, annual interest charges can be determined by applying the interest charge to one-half of the initial investment which is the average investment. Interest cost for both derricks is $9,187.50 annually.

Ad-valorem taxes must be paid on factory owned equipment. The exact tax amount is based on assessed market value and varies widely between areas. Property taxes on factory owned equipment is estimated at 1 per cent of the initial investment. The annual tax of both derricks is $2,625.00.

By the same token, insurance rates on factory equipment vary from mill to mill; however, an estimated insurance cost of .5 per cent of initial investment has been assumed. The annual insurance cost of both derricks is $1,312.50.

For planning purposes, it is assumed that an average grinding season will be seventy days per year. The annual cost of each system will be spread over the entire length of this assumed average grinding period. For comparison purposes, hourly cost of operation will be determined. This is done by dividing total annual cost by the number of hours in the 70 day grinding period. This is 1,680 hours.

This procedure is followed in Table 1 and 2. The hourly fixed cost, which is the cost of simply owning but not operating both derricks is $15.62. Electric power for both derricks cost $1.50 cents per hour. Repairs and maintenance cost $6.562 per hour for both derricks. Therefore, it costs $8.06 per hour just to operate both derricks. The total cost of both owning and operating both derricks is $23.68 per hour.

You will notice that labor costs have been excluded from this analysis because the Supple System, under most conditions, will not result in a reduction in labor. However, some mills may find that payloader operators are not as hard to train as derrick operators and therefore not paid as much. Since each system requires the same amount of labor, and labor costs vary from mill to mill these costs have been purposely excluded. Anyone interested can easily plug in their own hourly labor costs.

The same procedure was followed in analysing the cost of the Supple System. One payloader of the type and size used at Catherine Factory cost $46,000.00 Table 3). Naturally, its life will not be as great as that of a derrick. The useful life of a payloader is estimated to be 12 years, no trade-in value is assigned the payloader.

Depreciation at that rate will cost $3,833.33 annually. Interest will be $1,610.00 annually, and taxes and insurance combined will cost $690.00 each year. This breakdown is shown in Table 3. The total cost of owning each payloader will be $6,133.33 annually or $3.651 per hour.

Each payloader requires 54 cents for fuel each hour. Oil and filters cost 22 cents per hour, and tires another 95 cents per hour. Two dollars per hour is allocated for repairs and maintenance for each machine. The total cost to operate each machine is $3.71 per hour.

The combined cost of owning and operating each payloader is $7.36 per hour. Since our hypothetical mill would use two payloaders, the hourly

machine cost of the Supple System would be $14.72. However, it must be remembered that when conversion was made to the Supple System at our hypothetical mill, storage space had to be expanded about 63 per cent. Assuming that none of this concrete was present before, we must estimate the cost of this extra storage space.

It has already been determined that an additional 19,744 square feet are needed when adopting the Supple System. The assumption is made that the existing storage pad is well constructed and will support the machine used in the Supple System.

Based on these assumptions it would cost $13,300.40 initially to expand our storage to the required amount (Table 4). Based on 1,680 hours annual use this would cost 67 cents per hour for added storage. In fact some mills would not incur this entire cost because they may have some additional concrete space already available or could use their own labor to pour concrete.

The costs per hour derived in Tables 1, 2, 3 & 4 are presented in the following summary form.

Amount	Item	$/Hour
1	derrick with 60 foot boom	11.31
1	derrick with 80 foot boom	12.37
1	19,744 square feet expansion of existing storage pad	.67
1	payloader like one used at Catherine in 1969	7.36

Using the figures derived in the various tables and summarized above it would cost $23.68 per hour to replace existing derricks with two new ones. The cost of switching to and operating the Supple System with two machines would be $14.72 per hour for payloaders plus $.67 per hour for expansion of two existing storage pads. This is a total of $15.39 per hour. Therefore using two payloaders in the Supple System at our hypothetical mill would cost $8.29 per hour less than using two new derricks.

If we had elected to purchase three machines, using one as a back up, the total cost per hour of the Supple System would become $22.75 per hour (this includes the cost of storage pad expansion). The three-machine Supple System at the example mill would still cost $.93 per hour less than the conventional derrick system. This slightly over states the cost of the Supple System, using a third machine as a backup. I have assigned full cost of owning and operating to the backup machine. In reality the backup payloader would be cheaper than the operating machines because of longer life expectancy and lower fuel, tire, and repair costs.

Some people have voiced concern over the amount of cane crushed on the mill yard by the Supple System. Using our hypothetical mill with two payloaders we would have to crush over 13 net tons of cane per day to eliminate the cost savings over the conventional derrick. This is based on 190 pounds sugar per net ton and the 1969 seasons average sugar price as of February 3, 1970.

Summary

In summary I would like to point out the more important points of this paper. First of all this paper does not conclude that every mill in Louisiana should immediately replace existing derricks with the Supple System. However, it is felt that the Supple System has proven through two grinding seasons that it should be seriously considered when existing derrick systems have to be replaced.

This paper was limited to explaining the possibility of adapting the Supple System to mill yard use through the use of a hypothetical mill. The conditions assumed to exist at this hypothetical mill are not the only ones under which the Supple System will operate. Every mill has different conditions, and mill managers should use their imagination in trying different variations of the Supple System at their own particular mills.

The Supple System has some definite advantages that should appeal to most mill people. Probably the most significant non-economic advantage is the ease with which operators can be train-

(Continued on next page)

ed. At Catherine Factory it was found that four hours was the average time required for an operator to become proficient.

There are other possible uses for the payloaders outside of grinding season. With the standard bucket attachment they could be leased to construction companies, or used to load shells, sands, or soil. This of course gives the Supple System a very definite advantage over the derrick system. No one has yet found another use for a derrick.

The Supple System is much more versatile on the mill yard than a derrick system. It makes it possible to pick up dropped cane on the mill yard. If one feeder table breaks down, cane can still be fed from two storage areas onto the remaining feeder table.

In conclusion, the Supple System has the ability to make both an economic contribution and reduce labor worries at some Louisiana mills. It deserves consideration whenever replacement of existing cane handling systems becomes necessary.

Table 1: Installed cost of a 6-ton capacity, guyed, steel, all electric AC-DC individual drive motors, derrick with a 60 foot horizontal boom. Cost includes paved unloading site and derrick stand.

INITIAL INVESTMENT		Dollars
Derrick		125,000
Annual Fixed Costs		
Depreciation (20 year life)	6,250.00	
Interest (7% of ½ initial investment)	4,375.00	
Taxes and insurance (1.5% of initial investment	1,875.00	
Annual Fixed Cost	12,500.00	
Total Fixed Hourly Costs (a)		7.440
Variable Costs Per Hour		
Electric Power (b)	.750	
Repairs and maintenance (c)	3.125	
Total Variable Costs	3.875	3.875
TOTAL COST PER HOUR (Minus Labor)		11.315

(a) Based on 1,680 hours annual use (70 days at 24 hours per day)

(b) Estimated at .015 per hour per motor horsepower

(c) Estimated at 0.25% of initial investment cost per 100 hours use. Includes cost for all lubrication, hoist and cable repair and replacement, all derrick repairs and maintenance, and all minor and major engine repairs and maintenance.

Table 2.

REVOLVING DERRICK: Installed Cost of a 12-ton capacity, guyed, steel, electric power unit with a 80 foot horizontal boom. AC-DC individual motor drive. Cost includes paved unloading site and derrick stand.

INITIAL INVESTMENT		Dollars
Derrick		$137,500
Annual Fixed Costs		
Depreciation (20 year life)	6,875.00	
Interest on investment (7% of ½ initial investment)	4,812.50	
Taxes and Insurance (1.5% of initial investment)	2,062.50	
Annual Fixed Costs	13,750.00	
Total Fixed Hourly Cost (a)		8.185
Variable Costs Per Hour		
Electric Power (b)	.750	
Repairs and Maintenance (c)	3.437	
Variable costs per hour	4.187	4.187
TOTAL COST PER HOUR (minus labor costs)		12.372

(a) Based on 1,680 hours annual use (70 days at 24 hours per day)

(b) Estimated at .015 per hour per motor horsepower

(c) Estimated at 0.25% of initial investment cost per 100 hours use, includes cost for all lubrication, hoist and cable repair and replacement, all derrick repairs and maintenance, and all minor and major engine repairs and maintenance.

Table 3.
SUPPLE SYSTEM: Front-end Payloader, International Harvester, H-80 DT-429 Diesel Engine, 6 cylinder, 429 cu. in. with front end mounted cane grab.

INITIAL INVESTMENT		Dollars
Payloader		46,000.00
Depreciation Payloader (12 years)	3,833.33	
Interest (7% of ½ investment)	1,610.00	
Taxes (.5% initial investment)	230.00	
Insurance (1% investment)	460.00	
Annual Fixed Costs	6,133.33	
Total Fixed Hourly Costs (a)		3.651
VARIABLE COST PER HOUR		
Fuel 3 G.P.H. at 18c/Gal.	.540	
Oil & Filters	.221	
Repairs and Maintenance	2.000	
Tires	.947	
Variable Costs Per Hour	3.708	3.708
TOTAL COSTS PER HOUR (Minus labor costs)		7.359

(a) Based on 1,680 hours annual use (70 days at 24 hours per day)

Table 4. Cost of pouring, 19,744 ft.^{2} of additional concrete storage pad as required by adoption of the Supple System at our hypothetical mill. Concrete slab is poured 6" thick on one foot of river sand, reinforced with 3/8" reinforcing rods every 18".

INITIAL INVESTMENT	Dollars
Concrete (366 yd^3 at $17.00/yd^3)	6,220.00
River Sand (732 yd^3 at $2/yd^3)	1,464.00
3/8" reinforcing rods (25,600 linear feet at $2.65/linear foot)	678.40
Labor Costs (b)	4,936.00
	13,300.40

Annual Fixed Costs

Depreciation (20 year life)	665.02
Interest on investment (7% of ½ initial investment,	465.51
	1130.53
Total Hourly Fixed Cost (a)	$ .673

(a) Based on 1,680 hours annual use (70 days at 24 hours per day)

(b) Estimated by the Portland Cement Association at $.25/ft^2

(Fig. 1 and Fig. 2 on next page)

IN THE FIELD

(Continued from page 119)

all the details concerning the U. S. Sugar Act.

In January of 1970, this same group again came to the League and asked for detailed information on the cane variety development program. Another day's program has been arranged for the group. A panel discussion, covering in great detail exactly how a new variety is developed, is to be held at Nicholls College on Tuesday, February 17, 1970, for this group. Several of the key individuals actually engaged in the cane breeding program at L.S.U., the U.S.D.A., and the League will compose the panel.

All of this proves cane growers enjoy meetings and they are eager to learn.

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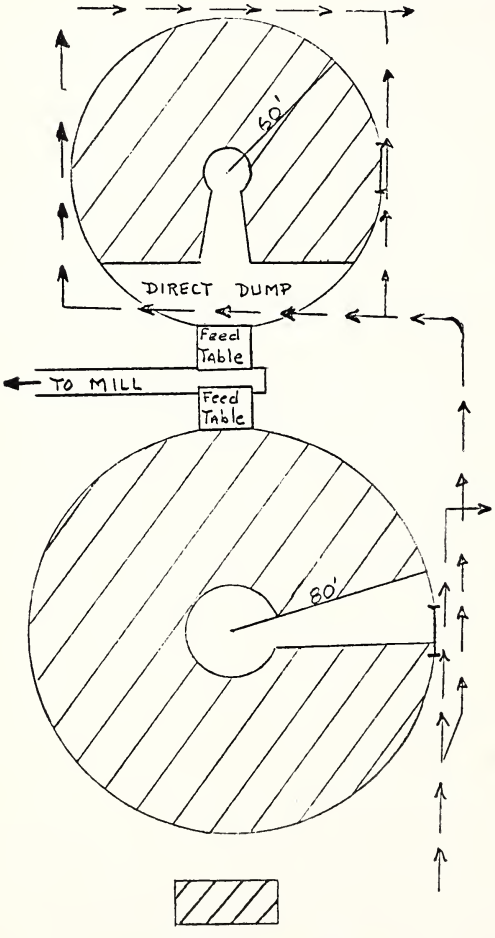
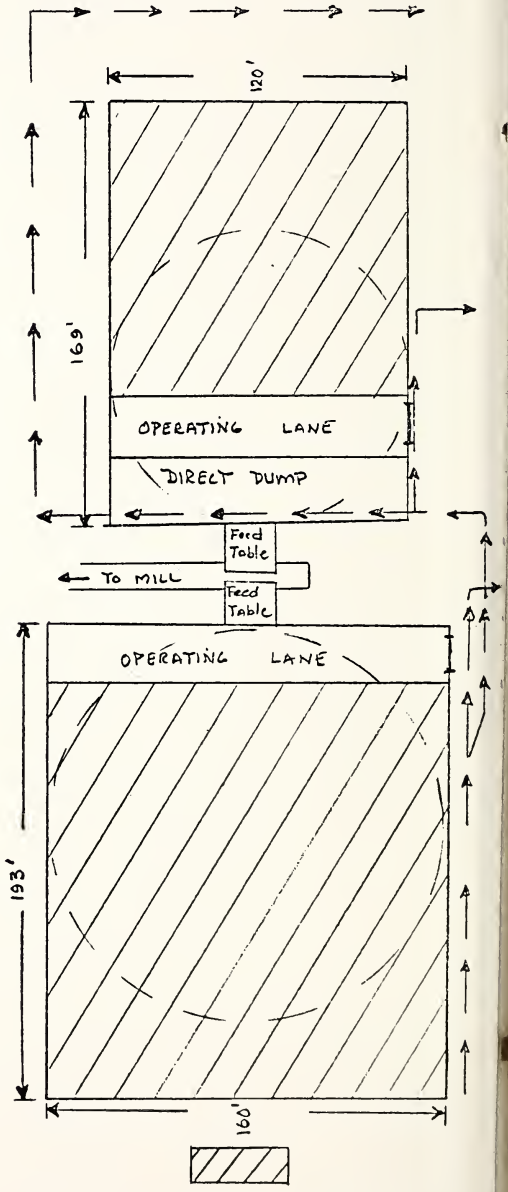
Figure 1: Hypothetical Mill Yard Using Conventional Derrick System; 3,000 Ton Per Day Capacity.



Available Storage Area

Total Concrete Surface is 31,416 ft²

Figure 2: Hypothetical Mill Yard Using Supple System; 3,000 Ton Per Day Capacity.



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Total Concrete Surface is 51,160 ft²

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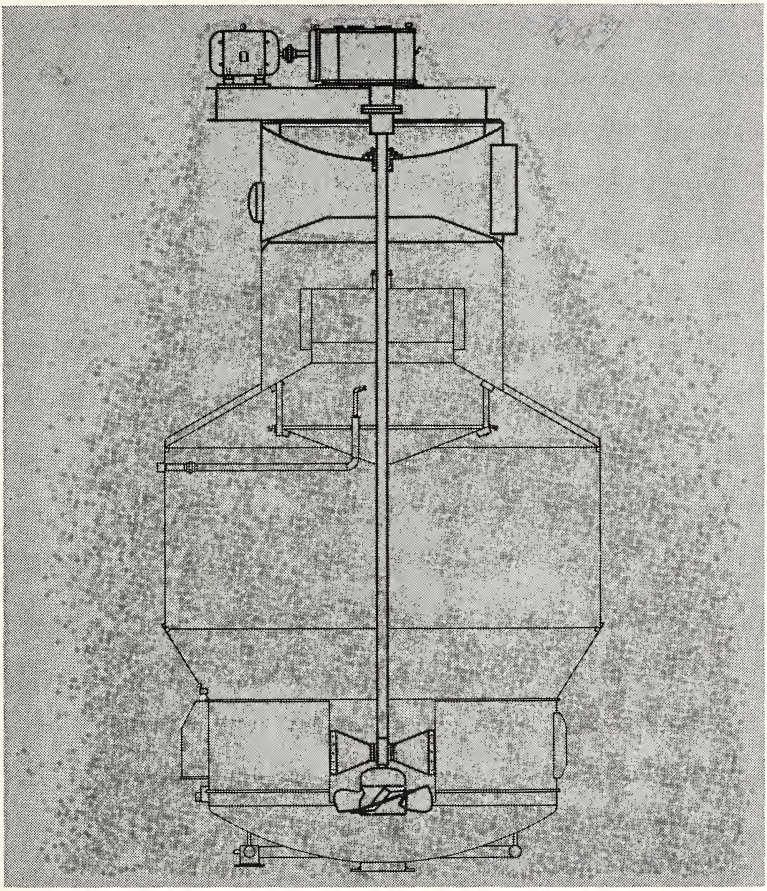

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THE SUGAR BULLETIN

Vol. 48—No. 11 March 1, 1970

Official Bulletin of the American Sugar Cane League of the U. S. A.

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

Contact Meeting at L.S.U. March 19, 1970

The Contact Committee of the American Sugar Cane League will hold its annual meeting in the Colonnade Theater at the Louisiana State University Union in Baton Rouge, La., Thursday March 19, 1970 beginning at 9:00 o'clock in the morning. Mr. Louis Arceneaux, Chairman of the Committee and Dr. Doyle Chambers, Director of the Experiment Station invite all cane growers and others interested in sugar cane to attend the meeting.

This meeting gives cane growers an opportunity to hear about the experimental work being conducted on sugar cane from the scientists doing the work. Scientists working on the many problems of growing sugar cane report their findings to this Committee and growers have the opportunity to ask questions and make comments on the research.

The report on new varieties is always an interesting subject to cane growers and a generous portion of this meeting will pertain to the subject. Of importance in the variety development program at this time are the large number of varieties being selected which have high sugar per ton. This is the area in the cane breeding program in which most success has been achieved. The use of high sucrose parents in cane crosses have produced varieties that have possessed both high sucrose and several other acceptable characteristics. L. 60-25 and L. 62-96 are two released varieties which are examples of this. There are many high sucrose varieties now in the unrelease variety program and some with higher sugar per ton than either of the above mentioned varieties. It is hoped that higher yield of cane per acre can be combined with high sugar per ton. In the past, the use of high tonnage canes as parents has not produced varieties which were much better from the field of cane per acre standpoint, than those already in use.

In addition to the reports on varieties, there will be talks on weed control, the sugar cane borer situation, fertilization, cultivation studies, economic studies, and other interesting topics on growing sugar cane.

The American Sugar Cane League has traditionally held this meeting at the University. The variety development program is a cooperative effort of L.S.U. the U.S.D.A. and the League.

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THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans, La. 70130
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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN WASHINGTON WITH HORACE GODFREY

By Horace Godfrey

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Highlights On Sugar From The Annual USDA Outlook Conference

Production And Use

USDA now estimates total domestic production at approximately 6,150,000 tons, consisting of production from different areas as follows: Mainland Cane—1,055,000 to 1,060,000; Beets 3,420,000; Hawaii—1,180,000; and Puerto Rico—483,000. Per capita distribution for 1969 continued at the same level as 1968 of 107 pounds, raw value, which exceeds forecasts for both years. USDA feels that supplies are adequate and that Puerto Rican deficit for current year may be about the same as for last year.

Other Sweetners

USDA Representative stated that in his opinion the cyclamate decision was not really important insofar as sugar consumption was concerned. In discussing several new sweetners he felt that they would not be real competitors with sugar. He stated that these new sweetners may slow up or stabilize the consumption at present per capita levels of sugar but he did not foresee any immediate danger insofar as competition but felt the competition may be serious by 1975.

World Sugar Situation

The Foreign Agricultural Service now estimates that world sugar production for the 1969-70 crop year will amount to about 78.5 million short tons, raw value. This is almost 1 million tons less than had been estimated in November; however, it would still be a record production and exceed consumption by about 2 million tons. Carryover stocks at the end of the 1968-69 season are estimated at about 21 million short tons. This is an ample level.

The Russian production estimate, on slightly lower acreage, has been reduced by one million tons. It is possible that the Dominican Republic may produce 1,120,000 tons of sugar, compared to our earlier estimate of 950,000 tons. Production in the Philippines is now estimated at 2,105,000 short tons for 1969-70, compared with our previous estimate of 1,903,000 tons. India is expected to have a record production, and acreage for the 1969-70 season was increased by some 14 per cent over the previous year. Our sugar production estimate for Cuba for the 1969-70 crop is unchanged from our November estimate which was 8 million short tons. We might change this later if conditions warrant it.

The Economic Community continues to produce surplus sugar which it sells on the world market at low prices. Exports are heavily subsidized and at a large cost to the Agricultural Fund. The EC produces a surplus of around a million tons a year at a cost disposal of about $100 million.

It is less costly for the EC to export sugar than it is to denature it for feed. The European Common Market Ministers of Agriculture on February 3 failed to agree on proposals to reduce the EC sugar production quotas and to reduce support prices.

IN THE FIELD

Nowhere else in the sugar cane growing world is there any closer and better relationship between governmental agencies and industry on a research program than there exists in the Louisiana sugar industry. It goes without saying that the job of breeding sugar cane, a tropical crop, for a sub-tropical climate is extremely difficult. Because of the short growing season and the low temperatures received during the winter in Louisiana, cane breeders in Louisiana are faced with many problems that other cane breeders of the world rarely have to think about.

Cane breeders from all over the sugar cane growing world have visited both the L.S.U. and the U.S.D.A. cane breeding programs to learn of the techniques used. Many have expressed complete surprise at the success obtained in view of the climate for which cane is being bred.

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UP FRONT WITH THE LEAGUE

By A. W. Dykers

The Old Mule

The Old Mule is in trouble again. Our market character must have been blinded, or lost his sense of equilibrium, or something, because he apparently can't see the target price which he has passed on two occasions during the past two months, first on the way up and again on the way down. Believe it or not, during the last two weeks in January, the price of raws was seventeen points **above** the "target" and today (February 26th) it is 22 points **below** the target price.

Early in January, when first quarter quotas were in effect, the market soothsayers seemed convinced that, regardless of what happened, the price of sugar would continue strong. There were no boats to carry the sugar to eastern seaboard ports, they pointed out, and agreed that without boats the eastern refiners were in one heck-of-a-fix.

It is interesting to note that when the U.S.D.A. finally broke down and removed all first quarter quotas, a miracle happened. Boats began popping up like corks in a tub. Some of them, it developed, were even floating around with sugar in them and suddenly became "distressed". Naturally, a sensitive soul like our Old Mule got shook up and went into a tail spin, with the aforesaid results. We now ask the drivers in Washington to get him back on the beam.

Youngsville

Pictured above is what is left of the Youngsville mill which was completely destroyed by fire during the early morning hours of Sunday, November 23, 1969. When the fire occurred, Youngsville had ground only 40,000 tons of cane and was about half-way through its 1969 grinding schedule.

Whether the mill would be rebuilt has been the big question in Louisiana for the past few months and today we have the answer. It is "No". On February 16th, the Directors of Youngs' Industries, Inc., owners of the Youngsville Factory, announced with regret that there is "no feasible alternative to

he discontinuation of factory operations at Youngsville."

The decision not to rebuild Youngsville leaves Louisiana with 42 sugar mills to process the cane crop. Cane from the Youngsville plantations will be handled by the Patout "Enterprise" factory.

Officers Of The ASSCT.

The "Up Front" column was squeezed out of the February 15th issue of the Sugar Bulletin and this is the first opportunity we have had to record the names of the newly elected officers of the American Society of Sugar Cane Technologists. Listed below are the names of the newly elected officials:

President—Minus J. Granger, Franklin, La.

1st Vice President—F. A. Graugnard, Jr., St. James, La.

2nd Vice-President — James E. Irvine, Houma, La.

Agricultural Section Chairman—C. H. Burleigh, Houma, La.

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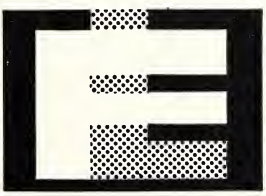
   Condition Fair—Lafayette, La.
2. Used AC HD11B-E Tractor, s/n 1829, 11HA Angle Dozer Blade, 22" Shoes, Canopy.
   Condition Fair—Baton Rouge, La.
3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.
4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.
5. Used AC HD16DC, s/n 6040, 24" Shoes, New Canopy, 16HS Straight Bulldozer Blade.
   Condition Good—Baton Rouge, La.
6. Used John Deere Pull type Tow Tractor, Rubber Tired, Diesel Engine, Drawbar.
   Condition Good—Baton Rouge, La.
7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11363, GM 3-53 Diesel Engine, 24" Shoes, 25' Boom, Fairlead.
   Condition Good—New Orleans, La.
9. Used Koehring 205 Dragline, s/n C11327, GM 3-71 Diesel Engine, 24" Shoes, 35' Boom.
   Condition Good—Baton Rouge, La.



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THE SUGAR BULLETIN

Vol. 48—No. 12 March 15, 1970

Official Bulletin of the American Sugar Cane League of the U. S. A.

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PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH
IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

A Few Reports Of Second Year Stubble L.60-25 Bad

A discouraging report on conditions of second year stubble of L.60-25 in two large tracts was received from Mr. Howard Robichaux, League Agronomist Western and Northern Area. One bad acreage of second stubble L.60-25 was found on Oaklawn Division of South Coast Corp., Franklin, La. According to Mr. Roland Diaz, Manager, 47 acres will be plowed out. The other bad field was located in Iberia Parish on Caroline Plantation operated by Mr. Pliny Walet and Mr. Herman Walet. According to Mr. Robichaux the bad cane was not in the heavy soils but in the fine textured sandy soils on both Oaklawn and at Caroline. First year stubble at both Caroline and Oaklawn was good.

Some very poor second year stubble of L.60-25 was found on two farms on the Mississippi River on March 6, 1970. The Secondary Station of F. A. Graugnard & Sons, Inc. and Armant Plantation were surveyed with owners and or managers and, in general, all second year L.60-25 both in heavy and in sandy soil was poor. According to Mr. Denis Lanaux of Glendale Plantation, Lucy, La., second year stubble is good on that farm. It was interesting to note both second year stubble of C.P. 55-30 and C.P.52-68 was good nearby

(Continued on page 153)

JOHN B. LEVERT DIES

FLASH—As we go to press, word is received of the death of John B. Levert who passed away while a ship, on which he was taking a cruise around the world, was in far off Hong Kong. We understand that he died of a heart attack after being rushed to a Hong Kong hospital.

John Levert was a member of one of the best known Louisiana sugar families. From 1944 until he retired in 1969 he was President and Chief Executive Officer of both the J. B. Levert Land Company and Levert St. John, Inc. He served on the Executive Committee of the American Sugar Cane League for thirteen years beginning in 1955 and was Treasurer of the League in 1965-66. He was Chairman of the Raw Sugar Quotation Committee of the Louisiana Sugar Exchange from 1950 through 1953 and President of the Exchange for two terms beginning in March 1955, John was 69 years old.

RECEIPTS OF OFFSHORE RAWS AT NEW ORLEANS (LONG TONS)

	American	Godchaux Henderson	Colonial	South Coast	Southdown	Supreme	Totals	Cumulative*
1969	495,710	286,739	358,660	52,946	87,363	47,231		1,328,649
1970								
January	24,114	5,905	17,654	None	None	4,921	52,594	52,594
February	37,903	5,000	15,231	None	4,500	None	62,634	115,228

*Does not include offshore raws transloaded from ships to barges in the Mississippi River for Industrial Sugars, Inc., and Sucrest. These shipments amounted to 171,434 long tons in 1969.

The January through February 1970 total is 52,784 long tons.

IN WASHINGTON WITH HORACE GODFREY

By Horace Godfrey

Sugar Man Of The Year For 1969

Benjamin A. Oxnard—recently retired Senior Vice-President of the Great Western Sugar Company on February 26th, 1970 received the Dyer Memorial Award as "Sugar Man of the Year" for 1969.

This twelfth annual sugar-trade award, recognized the winner's meritorious contributions to the sugar industry.

"Ben Oxnard's contributions to the sugar industry, brought to the industry a moving, vital force in sugar marketing, in packaging and in historical significance."

"Combining his technical background and marketing abilities, Mr. Oxnard pioneered between 1934 and 1937 in perfecting—after several disappointments—the machine-packing of 5-lb. multi-wall paper bags in 60-lb. paper bundles. Today, competitive sellers distribute over sixty million of these bundles each year in the U. S. A. These packages replace the historic 100-lb. cloth bags, which were frequently re-packed by hand in smaller units at the local grocery for the household consumer."

Mr. Oxnard was born and raised in the sugar business, with forbears in the sugar business dating back over 130 years. His father, Benjamin, founded the Savannah Sugar Refining Corporation in 1915 and developed the Adeline Sugar Company plantation and mill in Louisiana. His three uncles—Henry, Robert and James—helped to build the beet sugar industry in the West before the turn of the century.

Ben Oxnard came to Great Western Sugar Company in 1940 from Savannah Sugar Refining Co., where he worked for 16 years, serving as Sales Manager for the last ten. His first job at Great Western was General Sales Director. He was elected Vice-President in 1941 and a member of the Board of Directors in 1942. In 1968, he was elected Senior Vice-President before he retired at the mandatory age of 65.

In continuing our biographical sketches of members of the Louisiana Delegation, our sixth biography will be on Congressman Joe D. Waggonner, Jr.

Joe D. Wagonner, Jr.

Joe D. Waggonner, Jr., Democrat of Plain Dealing, Louisiana, born September 7, 1918, in Bossier Parish, received his education from Plain Dealing High School; B. A. degree, Louisiana Polytechnic Institute at Rouston, La. He was elected to the Bossier Parish School Board in 1954 and President of the Board in 1956; elected member of the Louisiana State Board of Education, 1960 and President of the Louisiana School Boards Association, 1961, as well as President, United Schools Committee of Louisiana. He served as a Lieutenant Commander, U. S. Navy, World War II and with the same rank from May, 1951 to November 1952 in the Korean Conflict;. Before being elected to Congress, he was operator of wholesale petroleum products distribution agency for North Bossier Parish. He is a Methodist Layman, Mason and member of the El Karubah Shrine, an Elk, member of the American Legion and the 40 & 8. He is also a member of the Lions Club and the Kappa Sigma Social fraternity. December 14, 1942, he married the former Mary Ruth Carter and they have two children, David and Carol Jean. He was first elected to the 87th Congress, December 19, 1961, and has been elected to the succeeding 88th, 89th, 90th and 91st Congresses. He serves on the House Administration Committee and the Science and Astronautics Committee.

BORER INFESTATION AND LOSS IN THE 1969 LOUISIANA SUGARCANE CROP

Leon J. Charpentier, Ralph Mathes, and W. J. McCormick,
Entomology Research Division, Agr. Res. Serv., USDA 70360

The 8 per cent 1969 harvest time infestation by the sugarcane borer (**Diatraea saccharalis F.**) was 6 per cent lower than the average for the preceding 6 years.

Harvest time surveys to determine degree of infestation by the sugarcane borer and crop losses caused by this pest have been conducted annually in Louisiana since 1935. From that year through 1960, the surveys were conducted cooperatively by entomologists of the Entomology Research Division and the Louisiana Agricultural Experiment Station. From 1961 to 1969, they were conducted by the USDA entomologists. During the 34 years (1935-68), the percentage of joints (internodes) bored (measure of infestation) has ranged from 5 to 28, with an average of 15 per cent.

The 1969 survey consisted of two examinations of 100 stalks each (twenty 5-stalk samples) at each of 21 representative mills located in 14 of the 16 parishes with mills (Charpentier and Mathes, 1962). Percentage of infestation was determined by counting the total number of joints showing external signs of borer injury. The Erath mill in Vermilion Parish, one of 22 mills in the survey program, was inoperative during the 1969 harvest and

(Continued on page 153)

Table 1. Sugarcane borer infestation data collected at mills in Louisiana during 1964-69 harvest seasons.

Mills	Percentage of joints bored in 1964	1965	1966	1967	1968	1969
Cora-Texas	10	13	14	20	18	14
St. John-Levert	8	27	16	20	11	12
St .James Co-Op.	12	19	20	23	9	11
Westfield	12	18	18	16	12	11
Erath	12	17	14	15	14	10*
Evan Hall	9	16	17	16	16	10
Lafourche Sugars	7	18	14	14	15	10
Southdown	12	21	18	15	12	10
Supreme	11	19	16	14	12	10
Armant	18	19	17	23	9	9
Oaklawn	10	17	14	16	11	8
San Francisco	13	14	15	16	12	8
Smithfield	14	16	8	13	9	7
Valentine	14	20	16	18	12	7
Alma	9	23	11	17	10	6
Duhe-Bourgeois	8	18	11	12	8	6
Iberia Co-Op.	16	21	14	15	11	6
Lower Terrebonne	16	19	16	20	7	6
Meeker	7	12	8	11	8	6
Myrtle Grove	11	14	10	13	9	6
Sterling	13	15	8	10	11	6
Billeaud's	7	19	7	17	11	5
Averages	11	18	14	16	11	8

*Mill inoperative during 1969 harvest; field examinations in mill areas substituted for usual mill yard examinations.

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SPREAD AND CONTROL OF SUGARCANE MOSAIC IN THE BUNKIE-MEEKER AREA OF LOUISIANA

Mike J. Giamalva, Head of Variety Outfield Testing for L.S.U.

Sugarcane mosaic has been known in Louisiana since 1919. Some areas have been known as "hot spots" for some time. Other areas have remained practically free from mosaic until recently. In most areas of the State, once mosaic was found, it spread rapidly, getting out of control in only a few years, in spite of continuous roguing.

In 1964 a group of growers from the Bunkie-Meeker area visited the L.S.U. sugarcane research plots in order to familiarize themselves with this "new disease". There had been much publicity about sugarcane mosaic but it was rarely recognized in their area.

Many explanations have been given for the absence of mosaic in this area. Among these are the absence of an efficient vector and the absence of inoculum.

The Bunkie-Meeker area has served as a source of mosaic-free seed cane for farmers from other areas. Each year seed from varieties such as N.Co. 310 and C.P. 52-68 has been used for this purpose.

Since the L.S.U. sugarcane replicated variety tests, located in the Bunkie area, has been rogued annually, the amount of mosaic present there was kept very low. However, adjoining fields which were to be used for seed, and one variety in the secondary station plot were found to have as much as 11% mosaic in May 1968.

Several meetings were held with the county agents and local farmers so that a roguing program could be started. On June 12, 1968 the first training program was held at Bunkie, La. With the aid of the Bunkie vocational agriculture teacher, 4 young men were selected and trained to rogue sugarcane for the control of mosaic.

Even though the roguing program was started late in the 1968 season, two thirds of the sugarcane used for seed that year was rogued at least once. Many spot checks were made following roguing and it was found that mosaic had been reduced to a trace.

In May 1969 another training meeting was held and a trained roguing crew was organized. In most cases seed rogued in 1969 was progeny of seed rogued in 1968. More than 80% of the seed planted in this area in 1969 had been rogued twice. A number of checks were made in these rogued plots during 1969 and mosaic incidence was never more than a trace.

In May 1968 several areas were selected to study the spread of mosaic in the Bunkie-Meeker area. Plots consisted of L. 62-68 which had 11% mosaic, L. 60-25 which had one per cent mosaic, and N. Co. 310 which had 7% mosaic. It was not possible to maintain an unrogued check except in the N. Co. 310 plots. All roguing was done by walking each row twice per roguing so that it could be viewed from both sides.

Results are given in the following table:

(Continued on page 154)

Per cent mosaic rogued from plots at Bunkie, La. during 1968 and 1969.

Variety	Total No. stools	No. of stools rogued on each date. 5/68	6/68	7/68	8/68	5/69	6/69	7/69
L. 62-68	3000	331	8	3	2	2	1	0
L. 60-25	4400	43	2	2	1	1	0	0
N.Co. 310*	4800	336	3	2	1	0	1	0

*Surrounded by N.Co. 310 with 7% mosaic which was not rogued.

IN THE FIELD

(Continued from page 147)

on both the Graugnard Farm and at Armant. It will be noted that all these places mentioned are Secondary Stations. There is probably more L.60-25 acreage on Secondary Stations because these farms have, in addition to a share when a cane is released, the privilege of keeping all stubble the next year after a cane is released. Also, the observations were made while League Agronomists were inspecting stands in new varieties on the Stations.

It is hoped that these are only a few isolated cases of bad stands of second year stubble for this variety and that no more will be found. A variety must produce a good second stubble if it is to be grown in any great amount.

It is a certainty that almost every cane grower has been trying to increase L.60-25 as rapidly as possible. In the case of the two bad stands of L.60-25 cane at the Graugnard Farm and at Armant Plantation, seed had been taken from the fields both as plant cane and as first year stubble cane. This is probably true of the two reports from the Western Area, although the report received did not say. Some years seed taking hurts the next year's stand to a great degree. In other years seed taking seems to make little difference.

This is being called to growers attention now because this variety has always made good stands in both plant and stubble cane fields. Because of this, growers may fertilize second stubble fields of L.60-25 without checking stubble pieces. Growers may think the variety is a little slow coming up this year.

BORER INFESTATION

(Continued from page 149)

consequently the examinations were made in the field. Two 5-stalk samples from each of 10 fields being harvested on each examination date in that Parish were substituted for the usual mill yard examination of twenty 5-stalk samples. During the second examination period operations had been completed at several of the mills as a result of the short cane crop. One hundred stalks randomly selected from different places in these mill yards were examined.

The first examination in 1969 made during the period November 3-11, showed a 9.0 per cent bored joint infestation and the second during December 2-9, showed a 7.4 per cent infestation. It is reasonable to assume that the first examination consisted mainly of stubble (ratoon) and the second, plant cane. At the various mills, percentages of joints bored ranged from a low of 4 in the second examination to 18 in the first. Mill averages ranged from 5 to 14 per cent with an estimated average of 8 per cent for the 22 locations. The percentages of joints bored at each location in 1969 and the percentages for the 1964-68 harvests are given in Table 1. Compared with 1968, the infestation was from 1 to 6 per cent lighter at 19 of the 22 locations, 1 to 2 per cent higher at 2, and the same at 1. The 1969 harvest time infestation of 8 per cent was lighter by 3, 10, 6, 8, and 3 per cent than 1964-68, respectively, and 7 per cent lighter than the 15 per cent overall average for the 34-year period 1935-68. In 1962, following a 98 per cent mortality in overwintering borer populations caused by one of the coldest winters of this century, the infestation was 6 per cent.

The 4400 stalks examined in the 1969 survey had 59,507 joints or 1,911 (3 per cent) more than in 1968. Average percentage of bored stalks was 51 compared to 63 in 1968.

The crop loss is currently estimated to be three-fourths of the percentage of bored joints, that is 6 per cent for the 1969 crop and 8, 14, 11, 12, and 8 per cent for the crop years 1964-68, respectively.

Acknowledgement

The cooperation of the mill opera-

(Continued on page 154)

BORER INFESTATION

(Continued from page 153)

tors in the harvest time survey program is greatly appreciated.

Reference Cited

Charpentier, Leon J. and Ralph Mathes. 1962. Sugarcane borer infestation and loss in Louisiana. Sugar Bull., 40 (12): 132-33.

SPREAD AND CONTROL

(Continued from page 152)

Data in this table shows that by one careful roguing mosaic was reduced to a trace in all varieties. All mosaic rogued after the first roguing was probably missed the first time, or symptoms in infected plants had not appeared. The data also shows that by successive, careful roguing, mosaic can be drastically reduced, and that very little if any secondary spread occurred. The low incidence of secondary spread has also been observed throughout the Bunkie-Meeker area.

It was found that when mosaic percentages were very low, as in this area, all stalks showing symptoms could easily be dug out and removed from the field. In plant cane when one shoot shows symptoms the entire seed piece is removed from the fields. These infected stools should be destroyed so that they will not serve as a source of future infection.

The Bunkie-Meeker area can serve as a source of mosaic free seed for the remainder of the Louisiana sugarcane

(Continued on page 155)

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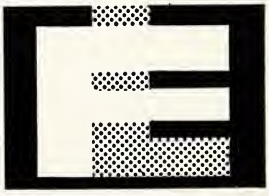
3. Used AC HD6B, s/n 4063, Tractor, 20" Shoes, Hydraulic Bulldozer Blade.
   Condition Fair—New Orleans, La.
4. Used Koehring 304 1 Yd. Dragline, s/n C8586, Cat D318 Diesel Engine, 30" Shoes, 45' Boom, Fairlead.
   Condition Good—New Orleans, La.
5. Used AC HD16DC, s/n 6040, 24" Shoes, New Canopy, 16HS Straight Bulldozer Blade.
   Condition Good—Baton Rouge, La.
6. Used John Deere Pull type Tow Tractor, Rubber Tired, Diesel Engine, Drawbar.
   Condition Good—Baton Rouge, La.
7. Used Lima 34 1 Yd. Dragline, s/n 329147, GM 4-71 Diesel Engine, 30" Shoes, 35' Boom, Fairlead.
   Condition Good—Baton Rouge, La.
8. Used C-350 Bantam 1/2 Yd. Dragline, s/n 11363, GM 3-53 Diesel Engine, 24" Shoes, 25' Boom, Fairlead.
   Condition Good—New Orleans, La.
9. Used Koehring 205 Dragline, s/n C11327, GM 3-71 Diesel Engine, 24" Shoes, 35' Boom.
   Condition Good—Baton Rouge, La.



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SPREAD AND CONTROL

(Continued from page 154)

area. More emphasis should be placed on checking and roguing sugarcane in this area so that it can be maintained mosaic free. This must be a continuing program in order to obtain good results.

Careful, successive roguing can help to keep this area free from mosaic if no infected seed is brought into the area.

There are several other small areas in Louisiana where the incidence of mosaic is very low. One of these is Cloverly Farms at Lockport, Louisiana. These areas could be used as a continuing source of disease free seed cane.

Where stubble cane is to be used for seed the removal of infected shoots is very important.

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THE SUGAR BULLETIN

Vol. 48—No. 13 APRIL 1, 1970

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PUBLISHED ON THE FIRST AND FIFTEENTH OF EACH MONTH
IN THE INTERESTS OF THE DOMESTIC SUGAR CANE INDUSTRY

THE
SUGAR BULLETIN

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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UP FRONT WITH THE LEAGUE

By A. W. Dykers

Dykers (that's me) Retires

Effective April 1, 1970, the writer who has been the Managing Editor of The Sugar Bulletin since April, 1951, and connected with this official publication of the American Sugar Cane League in other capacities for over 35 years, will retire from this activity. We have had our good moments and our bad moments with The Sugar Bulletin but, generally speaking, the job has given us more happiness than sorrow and we have enjoyed almost all our experiences.

We were, and still are, especially fond of our market character The Old Mule. This good old beast has served us well and we have pangs of nostalgia when we contemplate putting him out to pasture. However, all good things must come to an end and this development is one of them.

The Good Lord being willing, we hope to be around for a few more years as the Executive Secretary of the Louisiana Sugar Exchange.

Glenn Timmons, the Economist of the American Sugar Cane League, will take over the handling of The Sugar Bulletin, and will, of course, do a good job.

Exchange Meets

The Annual Meeting of the Louisiana Sugar Exchange was held in room 300 of the Whitney Building, New Orleans, on March 26th.

Each year the members of the Exchange elect half of the Board of Directors to two year terms and this year those elected were: T. M. Barker Lockport; F. Evans Farwell, New Orleans; Robert Fraser, New Orleans; Sedgwick Howard, New Orleans, Louis LeBourgeois, New Orleans; Sam H. Livaudais, Jr., New Orleans; M. D. Mc Namara, New Orleans; Sidney J. Menard, New Orleans; Charles C. Savoie, Belle Rose, La.; John Thibaut, Napoleonville, La.; J. Y. Whealdon, New Orleans; P. Chauvin Wilkinson, Port Allen, La., and H. L. Williams, Sugar Land, Texas.

Elected to one year terms to fill three vacancies on the Board were: William Nuttall, Plaquemine, La.; Rudd Seim, New Orleans, and E. Berkshire Terrill, Jr., of Brusly, La.

Other members of the Exchange Board of Directors are: Thomas H. Allen, Franklin, La.; Ramon Billeaud, New Orleans; W. S. Chadwick, Houston, Texas; Noel Edler, Mobile, Ala.; Charles F. Gibbins, New Orleans; F. A. Graugnard, Jr., St. James, La.; Malcolm Lambour, Jr., New Orleans; Charles A. Levy, New Orleans; James H. Thibaut, Donaldsonville, La., and Herbert C. Vaccaro, New Orleans.

The new Board of Directors of the Exchange held its first meeting immediately following the Annual Meeting and re-elected Sedgwick Howard to serve a second term as President. Other officers re-elected were: Sidney J. Menard, 1st Vice-President; James H. Thibaut, 2nd Vice-President; J. Y. Whealdon, 3rd Vice-President; Charles A. Levy, Treasurer, and A. W. Dykers, Executive Secretary.

President Howard's annual report is printed in full beginning on page 166 of this issue.

IN WASHINGTON

By: Horace Godfrey

Better Farm Image is Sought

A new farm-based organization was announced in Washington this month with the expressed intent to "improve the image of agriculture with urban America." Formation of the organization, the National Educational Institute for Agriculture was announced at a press conference by E. L. Hatcher, a Lamar, Colorado wheat farmer who will serve as NEIA's first board chairman.

The NEIA seeks to unite the American farm community in the common task of improving the image of agriculture. Currently the organization is supported by individuals and organizations concerned with the production and processing of corn, cotton, sugarcane and wheat. Hatcher stated at the press conference that, "the organization is urgently needed to prevent further erosion of understanding and appreciation on the part of the public at large for the problems and contributions of America's farmers. Otherwise, adequate, sustained and intelligent support for agriculture by the government might be abandoned for the insufficient reason that many people no longer believe it to be necessary."

The organization will operate on a non-profit, non-partisan basis. The bylaws require that the affairs of the Institute be strictly educational in nature. The single purpose is to get the facts before the public . . . and to get the facts understood . . . to provide a point of unity for all segments of the American farm community. Whether producers, suppliers or processors, the goal of improving the image of agriculture represents common ground for all.

Projects contemplated and already underway include an opinion poll to determine just what urban people think of agriculture, a campaign to gain wider exposure on television and other media of agricultural spokesmen, and a study to show the impact of farm income on the country's total economic development. Full use of up-to-date methods of getting the facts before the public: advertising, public service broadcasting, a newsletter and other printed materials will be used. The Institute will also serve as an informational clearing house on farm issues, assisting existing organizations in disseminating agriculture's story. Economic studies are being conducted to trace the impact of agricultural output on the rest of the economy, and in such seldom-probed areas as the effect of farm income on total development. A key point of focus will be the great potential rural areas offer for combatting the nation's total environmental problem. If farm income is maintained and improved, the necessary opportunities can be provided to make rural areas an attractive alternative to increased urban congestion.

Besides Hatcher who also serves as President of the National Wheat Growers Association, officers of NEIA include Vice Chairman, Jack Francis, Peoria, Arizona; Treasurer, Tom Allen, Franklin, Louisiana; and Board Members George Salley of Miami, Florida, Jack Stone of Stratford, Calif., Donnell Echols of La Mesa, Texas, Jack Grundfest of Cary, Miss., and E. Hervey Evans, Jr. of Laurinburg, North

(Continued on page 167)

IN THE FIELD WITH LLOYD L. LAUDEN

By Lloyd L. Lauden

Flash - Sinbar New Label on All Stubble Cane

As we go to press we learn that Sinbar, Dupont's new weed killer, is labeled in sugar cane for both plant cane and all stubble year canes. Up until now, this Sinbar has been labeled for plant and first year stubble cane only. The label states: "Do not replant treated areas to any crop other than sugar cane (or pineapple) within 2 years after last application as injury to subsequent crops may result."

We did not have time before press deadline to check with the Extension Service for the specific recommendations. Please check with the County Agents for the recommendations. Remember caution about both Fenac and Sinbar on susceptible varieties and light soils of Bunkie-Meeker area and lower Mississippi River Area.

Pollution

There is a fast growing concern all over the United States over the pollution of our environment. This concern is touching everyone. It is constantly in the news, on radio, television, and in the press. Both young and old are talking about both water and air pollution. Some of the discussions are very responsible and consider both sides of the issue and the facts are weighed. Other discussions are not so responsible but the fever of the fire is fanned by a crusader who, along with other things, would like to discontinue the use of all internal combustion engines until better smoke and fume arresters are developed.

The Louisiana sugar industry, along with other farm people, is concerned over pollution. Many sugar factories, where space have allowed, have established ponds to stabilize waste water before it is released. Most mills, many years ago, installed fly ash arresters on boiler stacks. As better arresters came on the market, these have been installed. The industry, for many years, has been concerned over stream pollution; and sugar mill representatives have cooperated with the Louisiana Stream Control Commission in every way possible.

Cane growers in particular have been aware of the hazards of using insecticides and herbicides around urban areas. Although there have been a few cases of misuse of these materials, cane growers are generally well informed of the hazards; and they have been very careful users of these materials. Growers, however, have not done a good job of keeping the city people informed on what these chemicals will do. More than a few times complaints from urban people are unfounded. Sugar cane growers, as well as other farmers, must do a better job of telling their urban neighbors about their business. Good public relations will pay off in this area.

There have been many complaints over the condition of the water in Bayou Teche and especially during the winter. There are several reasons for these conditions, including the dumping of waste material and the increased use of water, but the principal reason is the lack of flow in Bayou Teche.

There are plans now under way to help clean up the water in Bayou Teche. Cane growers and mill operators, along with the general public, will soon hear about the Teche-Vermilion Division Project. The purpose of the project is to increase the flow of water in Bayou Teche and in the Vermilion River. A pumping plant with a 470,000 gallon per minute capacity will be constructed near Krotz Springs to divert water from the Atchafalaya River into both Bayou Teche and the Vermilion River. This water can be managed so as to put additional water into the Vermilion River for summer rice irrigation when there is a big water

(Continued on page 167)

For the best weed control

Controls seedling Johnsongrass

Once Johnsongrass forms rhizomes, as shown above, it becomes well established. Left unchecked, it can take over your sugar cane crop. The most effective way to prevent this from happening is to control seedling Johnsongrass with "Sinbar".

Keep your sugar cane fields free of seedling Johnsongrass, as well as annual weeds and grasses, with a single application of Du Pont "Sinbar" in the spring. Or use a split application (fall plus spring).

No additives to "Sinbar" are needed. It kills germinating seedlings up to one inch tall. Also replaces multiple treatments usually necessary with other chemical herbi-

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Higher yields of sugar cane result when you control weeds and grasses with "Sinbar". This Louisiana field was treated with "Sinbar" in the fall. Picture taken in March shows the excellent control of winter annual weeds in the row.

cide programs. This reduces your application costs.

"Sinbar" is labeled for use in first-year stubble cane as well as in plant cane. It's an easy to use wettable powder that mixes readily with water. Get the most weed control for your money. Order your supply of Du Pont "Sinbar" from your local dealer today.

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RECOMMENDATIONS FOR THE CONTROL OF MOSAIC DISEASE IN SUGARCANE IN LOUISIANA, 1970[1]

Mosaic is present throughout the sugarcane growing area of Louisiana although only traces of infection occur in the northern area of the cane belt.

Recent research has shown that increasing percentage of Mosaic causes increasing loss of yield. Part of the loss in yields results from reduction in germination of both plant cane and stubble cane.

Mosaic is carried in seed cane that is taken from infected plants and is spread from diseased to healthy cane by aphids, or plant lice. Therefore, it is important that fields to be used for seed cane be relatively free of the disease.

The following are recommended for the control of Mosaic:

1. Learn to know the symptoms of Mosaic so you can identify the disease.

2. Survey in early spring the fields you expect to use for seed. This should be done as soon as stands are well established and the leaves show no cold injury or chemical injury. This may be anytime in April or as late as May, depending on the season. Choose fields for seed cane where there is a minimum of Mosaic.

3. Mosaic disease can be minimized by roguing seed plots and special emphasis should be placed on the newer varieties. The first roguing should be done as early as practical. Rogue the diseased plants by digging them out. In digging, remove the entire seed piece on which a diseased plant occurs. Carry these plants out and destroy them, or during dry conditions these diseased plants can be chopped and left in the middles. Repeat the inspection and roguing in such seed plots through May and June at about two-week intervals. Late season roguings (mid-June and on) can be accomplished by cutting the Mosaic-affected stool four to six inches above ground level then spraying the cut stool with erbon[2] [2-(2,4,5,-Trichlorophenoxyl) ethyl 2,2-Dichloropropionate] mixed with diesel fuel at the rate of 4 parts of diesel to 1 part Baron.

4. Mosaic-free seed should be planted as far removed as possible from fields known to be infected with the disease. If this is not practical, isolate fields to be used for seed by surrounding this area with Mosaic-resistant cane.

5. If you are growing N.Co. 310 that is highly infected with Mosaic, **discontinue** planting this variety until Mosaic can be reduced considerably. However, if N.Co 310 is planted, it should be heat treated and isolated from seed cane plots. Mosaic spreads more rapidly in this variety than in any other commercial variety, and growing it where Mosaic is prevalent makes it more difficult to control the disease in other varieties.

6. On properties where there is a very high percentage of Mosaic in all varieties, especially C.P. 52-68 and L. 60-25, obtain seed cane for planting with a minimum of Mosaic and progeny of heat treated cane. Even though Mosaic will spread into a crop grown from healthy seed cane, losses will be much less in plant and stubble than would be the case where diseased cane is used.

7. The planting of resistant varieties such as C.P. 61-37 will greatly assist in controlling Mosaic.

8. It is very important that the heat treatment for the control of Ratoon Stunting Disease (RSD) be continued

(Continued on page 167)

[1]Prepared jointly by Pathologists of the United States Department of Agriculture Sugarcane Field Station, Houma, Louisiana and the Louisiana State University Agricultural Experiment Station, Baton Rouge, Louisiana, in cooperation with the Louisiana Cooperative Extension Service, Louisiana State University, Baton Rouge, Louisiana.

[2]Erbon is the accepted common name for Baron.

DOWN THE ROW

By: Earl J. Hicks

In spite of winter grass, which is noticable in many areas, stands in general are very good. Most varieties appear to be established and growing well. One of the new varieties, C.P. 61-37 is outstandingly thick on the row. These good stands are somewhat of a surprise after the dry planting conditions last Fall. Several growers have voiced careful optimism concerning stands in the fields. However, the entire picture is not as bright as one would like it to be. Stands in some areas are poor, and in spots cane planted last Fall may have to be plowed out.

Until early March some field work was being done. Recent rains have all but stopped cultivation and herbicide work. Grass in stubble cane is evident again this year, however, plant cane is much cleaner. Growers are reminded to refer to and closely follow recommendations for controlling Johnson grass and Raoul grass.

The results of many years of research have gone into these recommendations and time has proven them to be the best practice to follow. The work of E. R. Stamper of the Louisiana Agricultural Experiment Station and Rex Millhollon of the USDA have helped the Louisiana sugar industry control grass problems. Take the time to read these recommendations. This time will pay off in a more effective grass control program and higher cane yields.

This year, as last, MSMA is suggested in the recommendations. MSMA is an excellent chemical, **but must be used on ditch banks only! Do not use MSMA in the cane field.**

All chemicals in the recommendations can be beneficial; however, when not used in accordance to specified rates they can cause crop damage. To avoid any problems with these chemicals discuss their use with your County Agent.

In addition to the proper use of herbicides, good equipment is a must for the best control of grass. Calibrate your equipment properly. Always use clean equipment. When agitation is required, make sure all internal parts are working. Wise use and proper handling of herbicides is time consuming, but necessary. Make your chemical program pay off.

Johnson Grass and Raoul Grass

Johnson grass needs no introduction to the Louisiana sugar cane grower. It is the major grass problem in our fields. Johnson grass is hardy and persistant. No chemical will completely control Johnson grass. A combination of fallow plowing and chemicals will give the best weed control. By fallow plowing, seeds and rhizomes will be destroyed.

Raoul grass is not as common as Johnson grass, but it is present in several sugar parishes. Unlike Johnson grass, Raoul grass grows directly from a seed. Fallow plowing prior to planting and a good ditch bank control program are essential in controlling Raoul grass. The use of Dowpon and TCA are effective in control of this grass.

Again it is important to point out the necessity of following the recommendations of the Experiment Stations on grass control. Although perfect control rarely occurs, better results will occur if these recommendations are followed.

ANNUAL REPORT OF SEDGWICK HOWARD, PRESIDENT
Of The Louisiana Sugar Exchange, Inc.

Members of the Louisiana Sugar Exchange and distinguished guests.

The 1969 crop year closed with rather mixed results for the Louisiana sugar industry. We won some and we lost some. We began the season with approximately 15% less acreage planted in cane than we had in 1968, or some 26% less planted acreage than we had in 1963. Because of our large crops in previous years and the resultant huge carry-overs of overquota sugar, the U. S. Department of Agriculture placed these acreage restrictions on us. The next thing to hit us last year was the late summer and fall drought. This drought affected most areas of Louisiana. In the hardest hit fields, it reduced the tonnage of cane per acre drastically. The lack of moisture in some fields did not allow the cane to grow tall enough to be properly topped even with the mechanical cane cutter blades lowered all the way. Then in mid-November a hard freeze hit Louisiana. Night time temperatures were reported at 22 degrees in many spots. There were reports of temperatures even lower. Luckily it was late enough in the season so that the damage was not too great. With all of these strikes against us, we still produced about 534,000 tons of raw sugar. This was 20% less than the 1968 production, but the 1968 crop was third largest produced in the last ten years. 1969 ran only 9% below the average of the last ten years, which is phenomenal in the face of the large acreage cuts that we have suffered.

At least a few good things happened to us in 1969. After holding public hearings, the U.S.D.A. decreed that we could have 12% more acreage in cane for our 1970 crop than we did for the 1969 crop; so at least we have something to look forward to. Next, Hurricane Camille missed the sugar belt. While this may seem to be a negative blessing; if it had come in west of New Orleans it would have been a real disaster. The lack of rain during the season had some good points—trash was held to a minimum, because it was dry the cane could be well burned. The cane matured early, because of the weather; and as a result the sucrose ran extremely high which gave us a high yield of sugar per ton of cane. Last, but perhaps most important was the price of raw sugar. The current season's average price is running 20 cents per hundred pounds higher than the 1968 season's average. The molasses price is also somewhat higher. However, even with the higher price Louisiana processors will collect about eighteen million three hundred thousand dollars less than they received in 1968.

With 1969 closing out a very exciting decade, let's look at how the sugar industry faired during the sixties.

The total consumption of sugar in the United States has climbed from 9,400,000 tons to 10,800,000 tons raw value in the last ten years. Despite the heavy increase artificial sweeteners, particularly in soft drinks—which are, by the way, the largest market for refined sugar in this country—every man, woman and child still consumes about 100 pounds of refined sugar per year. This, of course, is vital to the growth of the whole sugar industry. With per capita consumption remaining stable, total sugar consumption should increase with population growth by around 150,000 tons per year. During this same ten year period, with total consumption increasing by 15%, Louisiana production of raw sugar rose from 440,000 tons to 534,000 tons or more than 20%, and it certainly appears likely that with the restoration of 12% of our acreage and average growing conditions, we should produce more than 600,000 tons of raw sugar during the coming season.

In the same ten years, the season's average price for raw sugar has risen from $6.18 to $7.88 per hundred pounds—a 27% increase. In terms of dollars, this means the raw sugar processors received $30,000,000 more for their raw sugar production in 1969

ANNUAL REPORT

han they did in 1959. The three East Bank refiners and the three West Bank efiner-processors have provided the Louisiana raw sugar producers with a eady market for their increased production, and we assume will continue o do so as long as they are competitive vith other sources of refined sugar. New Orleans area refiners now produce nore than 20% of the refined sugar onsumed in the U. S.; and about 2% of the raw product used by these ix refiners is produced in Louisiana. Let us hope that the growth of the Louisiana sugar industry continues hrough the 1970s, and that all segments of the industry prosper.

I have been talking a lot about cane nd raw sugar, and may seem to be neglecting molasses. But to tell the ruth the molasses market during the 969 season has been featureless. We tarted the season off with a price of 3½ cents per gallon. On November rd the price rose to 14 cents, and it as remained there ever since. The verage to date is 13.926. Not a single ale has been reported to the Exchange, vhich leads to the obvious conclusion hat all of it was contracted for at the eginning of the season. The only note f interest was the establishment of a nolasses contract on the New York Coffee & Sugar Exchange. The object vas that users, producers and dealers ould hedge their forward purchases, ales or production. So far very limited se has been made of this contract.

As you know, the Louisiana Sugar Exchange's main purpose is to determine on a daily basis the true worth f raw sugar in the Port of New Orans and molasses F.O.B. Plantation. ach day, from October through April, he two quotations' committees are conacted and they decide on the price. We all wish to thank these men for heir diligence. Particular thanks hould go to Sidney Menard and Herb accaro for chairing these committees; nd as always to our Executive Secreary, Andrew Dykers, for his help in uiding our activities.

Thank you all for listening.

MOSAIC CONTROL

(Continued from page 164)

as the losses from Mosaic and RSD are cumulative. Since RSD causes great losses in L. 60-25, C.P. 61-37 and L. 62-96, a special effort should be made to establish Mosaic free plots for heat treatment.

9. Resistant varieties should be heat treated and planted before susceptible ones. Cane should be rogued at least once in the fall, especially recently released varieties.

—o—

IN WASHINGTON

(Continued from page 160)

Carolina. Each member of the Board is an agricultural producer. Board membership will be expanded as new groups and organizations join the effort. Support of producers, processors, suppliers and other agri-business is expected.

—o—

IN THE FIELD

(Continued from page 161)

demand in that area and also managed so as to give most of the additional flow to the Teche during the winter when there is a need for water in that stream.

The project seems sound. Everyone in the area will benefit. The Federal Government will spend $7 million to construct the project. The Teche-Vermilion Freshwater District established by the 1969 Legislature proposes levying a one and one-half mill tax in Iberia, Lafayette, St. Martin, and Vermilion Parishes to provide funds to operate and maintain the facility.

According to information received, the project will be operated by local people and it will be governed by the Tech-Vermilion Freshwater District.

HELP WANTED

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The Sugar Bulletin

OFFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U. S. A.

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Vol. 48—No. 14 **APRIL 15, 1970**

The Sugar Bulletin

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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Glenn R. Timmons, Economist
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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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ANDREW W. DYKERS

When I first came to work for the League in 1951, I met Andrew W. Dykers. He was working part time for the League and also as Executive Secretary for the Louisiana Sugar Exchange.

As the newly appointed General Manager of the League, I had a lot to learn and had to learn in a hurry. Andrew had worked for the Louisiana sugar industry many years and had over that period accumulated a lot of information and knowledge which I needed. Fortunately for me, Andrew gave me his full cooperation, in giving me background information and advice and his active help in carrying out the work of the League. For that I am very grateful.

Andrew retired from his League work on April 1 of this year but will continue as Executive Secretary of the Louisiana Sugar Exchange. I shall continue to seek his advice, because I value it highly.

Andrew is a remarkable man. He is capable, unselfish, and cooperative. The world could use more people like him.

Gilbert J. Durbin

RECEIPTS OF OFFSHORE RAWS AT NEW ORLEANS (LONG TONS)

	American	Godchaux Henderson	Colonial	South Coast	Southdown	Supreme	Totals	Cumulative*
1969	495,710	286,739	358,660	52,946	87,363	47,231		1,328,649
1970								
January	24,114	5,905	17,654	None	None	4,921	52,594	52,594
February	37,903	5,000	15,231	None	4,500	None	62,634	115,228
March	55,733	23,061	43,079	2,704	11,235	6,985	140,797	256,025

*Does not include offshore raws transloaded from ships to barges in the Mississippi River for Industrial Sugars, Inc., and Sucrest. These shipments amounted to 171,434 long tons in 1969.

The January through March 1970 total is 54,442 long tons.

IN WASHINGTON

By: Horace Godfrey

Excerpts From Speech On Farm Policy
(This is the first of a two part article)

Recently I was asked to speak at the Southern Farm Forum in Memphis, Tennessee to discuss farm policy. In my discussion I tried to make the point that farmers have a continuous problem of a rising tide of national misunderstanding of our agricultural heritage. The problem is best expressed in terms of the growing gap between the **facts** and the **fiction** concerning agriculture. In discussing this problem I stated:

"Those of us in agriculture in whatever capacity, experience considerable difficulty in telling our side of the story." In an effort to bring our side of the story into focus, I discussed three terms which I hope would help to combat our overall problem. These three terms are subsidies, payments and performance. A few quotes from my remarks on these three points:

First subsidies: "Agriculture—above all other industries—is singled out for automatic blame. The word subsidy has become so ingrained in the typical non-farmer's view of agriculture that the air around us contains an already pervasive . . . probably spreading . . . poison that threatens severe damage to the world's most efficient agricultural production plant."

"Government subsidies did not originate as a means of assisting agriculture. The first actual subsidy by the federal government was paid in 1845 when congress authorized the Postmaster General to award mail subsidies."

To emphasize this point I quoted a brief passage from the latest study on subsidies by the Joint Economic Committee on Congress.

"Government has subsidized private enterprise, both in industry and in agriculture, throughout the nation's history. It has done so directly and indirectly. In some cases, acting directly, it has made outright gifts: grants of public lands or payments from the Treasury. More often, it has given aid in less open ways: by rendering services for which it makes no charge, by selling goods and services for which it makes no charge, by selling goods and services for less than they are worth, by buying goods and services for more than they are worth, and by exempting some enterprises from taxes that others must pay."

In that same document—**a full 86 pages in length**—you will find a nine-page list of subsidy programs operated by the Federal Government: yet the programs on that list that directly assist farmers occupy **a mere 22 lines.**

"Maybe we need a new word for subsidies . . . maybe we should call them **incentives** instead. Whatever choice, subsidies are in the national interest, and they simply represent a safe and certain means of getting things done in a manner that results in national and individual betterment.

"Which brings me to the word **payment."** I daresay an airtight intellectual argument cannot be made to show that the present payment structure fails to meet the criteria of a subsidy that results in national and individual betterment.

(Continued on page 178)

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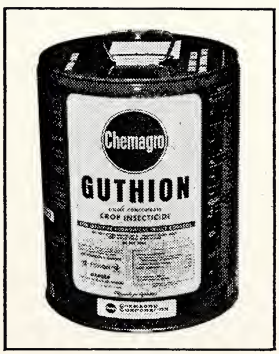

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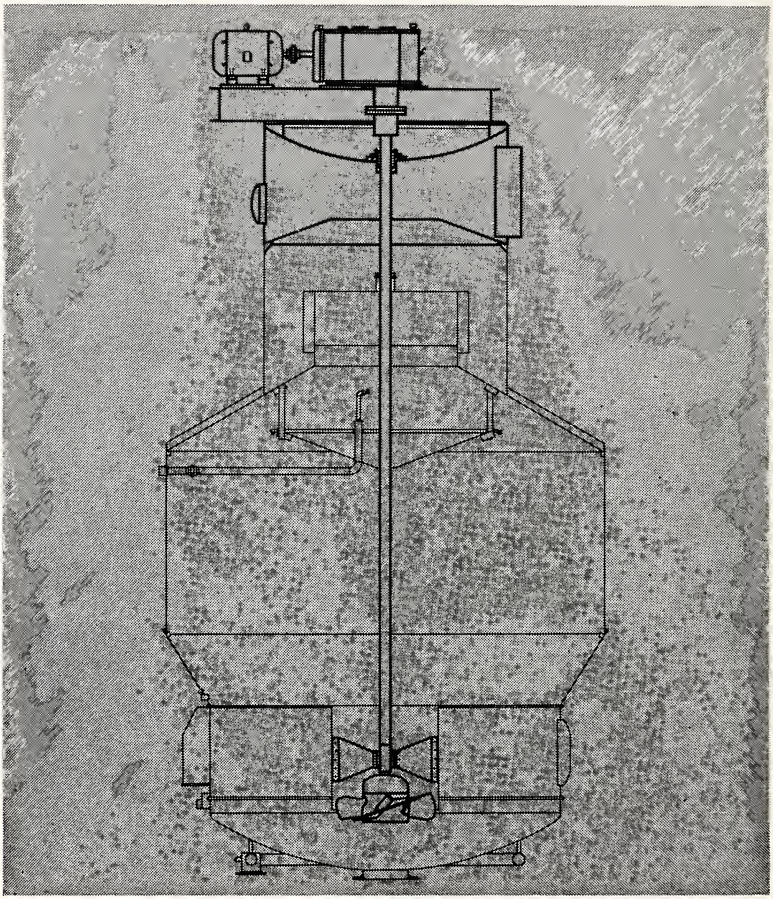

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IN THE FIELD

By: Lloyd L. Lauden

New Varieties

In 1966, the League, L. S. U. and the U.S.D.A. in cooperation released L 60-25. In 1967 C.P. 61-37 was released. In 1969 cane growers received L 62-96.

In general, these varieties will be of material benefit to the sugar industry although there are some poor stands of stubble cane of L 60-25 this year. It is interesting to note that L 60-25 was in the breeding, selection, and testing program for 10 years and in the cane fields on a commercial basis for an additional 3 years and not until this year was there ever a stubble failure. This illustrates the need for thorough testing before a variety is released. And even with this thorough testing something can happen which testing did not point out.

Those of us in the variety development program are keenly aware of the grave responsibility we have to growers when a variety is released. If, for some reason, a variety does not stubble well in either 1st or 2nd stubble, at a time when growers have a large percentage of that variety in their fields, the industry will suffer a financial loss. Everything possible is done to avoid this and thorough testing is our best way of preventing this failure. Occassionally growers will see an impressive looking unreleased variety that has been discarded by the variety development team and ask "Why wasn't this variety released?". Many unreleased varieties will look good for 2, 3, or 4 years and for some unknown reason these canes will become very erratic and go bad. They will not stubble at some places on some years and it is not always at the same places. Yields of cane will be up and down, sucrose will vary from place to place and from year to year. However, it must be repeated, these type unreleased varieties may look good to the eye at several places for two or three years and then, as mentioned earlier, these varieties will break down rapidly. The Test Field yields show this right away. It is then known to us that this cane is **dangerous** and can cause growers to **lose money.** These tests tell exactly what a variety will do. In these tests, many varieties are in the same plots and on the same type soil and each variety is in several different places within that one block of cane. Check varieties, such as commerical canes, are also planted in these tests to be used in comparison. A time proven method of analyzing the yields of cane and the sucrose received in each small plot is then used to determine which canes are **truly** better than the commercial varieties in the test. This tells far more than the eye can see. It is the only accurate way to test or evaluate varieties, and without this proven system, growers would probably receive far more varieties with a large number of them causing considerable trouble and financial loss of many growers. And this would happen often.

On the subject of new varieties there are a number of promising new canes in the "variety pipe line" L 64-30 is good looking cane with good eye appeal. It is tall and tests to date show it to have good population and good sucrose. It appears to produce good stands in both plant and stubble, and has good yield of cane per acre. It has two bad features. It is susceptible to mosaic and it will be hard to keep clean of the disease. The other bad feature

(Continued on page 179)

CANE TALK

By: Howard Robichaux

Western Outlook Good

In general the sugar cane outlook in the Western parishes is good in spite of unseasonably cold weather as late as the twenty-first of March. So far, April has been dry and anxious farmers have started the ball rolling in the field. Farmers are optimistic about their crop and feel that this season's plant cane is better than that of the previous year. There is also the general consensus among farmers that the stubble crop is slower than that of last year.

L-60-25

Plant cane and first year stubble of L 60-25 is showing well. Second stubble stands are thin and are slow in coming up. In many cases definite stand failures were found. Stools were rotted out and very little life could be found at all. Farmers give these contrasting reasons for the failure of **L 60-25.** Some say cane was cut for seed early in the season for two consecutive years. Others say cane was never cut for seed and harvested late in the grinding season. Scientists from the L. S. U. and Houma Experimental Stations have examined the stools of this cane. No definite statement about the cause of damage has been given yet. This variety has never before performed this way in 12 years of testing. It is hoped that this situation will improve and that this is not a variety fault.

C.P. 61-37

C.P. 61-37 is making a good showing throughout the cane belt. We hope this relatively new variety will continue to do well.

Experimental Rogueing Class

Mosaic disease is a problem most cane planters know all too well. Rogueing is one way to combat this disease. But farmers want a minimum amount of field labor and can't spare men to rogue cane. Training men to rogue cane is time consuming and costly. It is also difficult to find laborers willing to rogue cane. Because conscientious farmers want to keep the new varieties as free from mosaic as possible, Pete deGravelle, a local farmer; Minus Granger, St. Mary Parish County Agent; and this writer have come together to organize a plan in which teenage boys will be taught to rogue cane. These boys will be selected from the Franklin High School agriculture classes of Mr. Pat McCoin and Mr. Harold Harris. The boys are expected to work after school hours until summer when they will work on a full time basis under the supervision of Mr. Bill Williams on a number of small area farms. If this plan is successful, it will be continued next year.

—o—

IN WASHINGTON

(Continued from page 172)

Yet farm payments . . . worse, those who receive them . . . are singled out for increasing villification and abuse. The familiar theme . . . expressed over and over again in the national media . . . is that farm payments are handouts, something-for-nothing, a means of getting rich at taxpayer expense. A better understanding of farm payments would be helpful.

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N THE FIELD

(Continued from page 177)

of the variety is that it is damaged badly by freezes. This cane is in the testing program and its future will be decided by how it performs in the Outfield Test plots. It could be a candidate for release to growers in the future.

C. P. 64-388 is another example of a good looking "eye appeal" type cane. It is larger in barrel size that L 64-30 and to some growers will have more eye appeal for that reason. To date it has produced good yield of cane per acre. It has stubbled well and has more mosaic resistance than the above mentioned cane. It does not produce the sugar per ton of L 60-25 but sugar per ton is not bad in the variety. An outstanding feature of the variety is its cold resistance. It is about like N.Co.310 in this respect. If its other characteristic continues to be good, the industry could use another cane with this type cold resistance. It will, in all probability, be considered for release in the future.

In the 1965 group of canes there are a number of good looking canes. L 65-69, C.P. 65-350, C.P. 65-357 and L 65-67 all appear to show good promise for the future. Time and testing will determine those of the 1965 group which are good enough for release. It could be one that is not mentioned here.

In the 1966 group of new unreleased varieties there are 18 that were good enough to be sent to the Primary Stations and Test Fields last fall.

In the 1967 group of new unreleased varieties there are many more that look good.

The variety picture in Louisiana, in spite of the problem of mosaic disease, has never been better. There is a need, however, for improvement in mosaic disease resistance and greater tonnage per acre. Every effort is being made in both these areas. Time and the screening and testing of more varieties will certainly bring about a change for the better in both mosaic resistance and tons of cane per acre. A lot of time, money, and sweat go into our variety development program.

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The Sugar Bulletin

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EXECUTIVE COMMITTEE MEETING

May 27, 1970—1:30 p.m.
Peltier Auditorium, Francis T. Nicholls College
Thibodaux, Louisiana

ALL LEAGUE MEMBERS ARE INVITED TO ATTEND

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Stop and go—mostly stop, DON'T say Poison—Say HERBICIDE, L. 62-86 and C.P. 62-258, L. 62-96 It's the Nature of the Brute

Vol. 48—No. 15 **May 1, 1970**

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IN WASHINGTON

By: Horace Godfrey

SUGAR PRICES – A QUESTION

A recent report on sugar distribution by Primary Groups shows that distribution for 1970 is exceeding both 1969 and 1968. The report shows an increase of approximately 10% over 1969. As this article goes to press the Spot Price of $7.90 per hundredweight is 28¢ below the Target Price. This means that sellers continue to sell sugar below the Target Price even though consumption is holding up well as evidenced by distribution figures. One wonders why our foreign suppliers would continue to ship and sell at less than the Target Price when some restraint in selling could easily achieve an increase in the Spot to the Target Price.

Excerpts From Speech On Farm Policy
(Part II)

In continuing our discussion on subsidies, payments and performance:

"Too often these same critics have failed to take yet another factor into consideration, and this involves the third term I mentioned previously . . . the word **performance.**

"Actually we—and by we I mean farmers and agriculture in general—are confronted today with the grim possibility of becoming . . . to borrow the biblical phrase . . . 'without honor in our own country.' To me it is a sad commentary that the performance of American agriculture, its power and efficiency . . . that these are recognized, praised—even coveted—around the world to a greater degree than here at home.

"Does the man in the street recognize the simple fact that payments and the performance brought about through these incentives **in reality represent a subsidy to the consumer?** I doubt it.

"Do people realize that the great majority of farm operators have not shared equitably in total national prosperity . . . that between 1947 and 1968 while gross farm income increased by about $17 billion, **net farm income** actually fell by about **$3 billion?** Do they recognize that this represents a subsidy too . . . one devoured by inflation and consumers at the expense of the American farmer? I doubt that they recognize these facts.

"People simply must be made to realize that agriculture and the farmer remain at the cornerstone of our economy.

"Agricultural efficiency has freed and will continue to free millions from the farm to work in factories that churn out thousands of consumer goods that make the living in America easier than anywhere else in the world.

"If you throw out of the shopping cart the hair spray, the nylon stockings, the razor blades, detergents and flashlight batteries, you will be able to calculate that this efficiency has made America the home of the world's best

(Continued on page 191)

IN THE FIELD

By: Lloyd L. Lauden

Sprayer Innovation

If by chance growers see a herbicide sprayer at Valentine Sugars with what appears to be three half barrels hanging from behind where the nozzles are attached, take another look. This unusual looking appendage on the sprayer boom is an innovation of Mr. J. T. "Pete" Lagarde, Field Manager for Valentine Sugars, Lockport, La. Mr. Lagarde attached a hoop type arrangement around the nozzles for each of the rows and then hung wide rubber inner tube strips from the hoop. These strips completely surround the nozzle for each row and prevents the wind from distorting the spray pattern. Pete is not saying that he wants everyone to shroud their sprayer boom but he believes he is getting better coverage on windy April days. Mr. Lagarde and the writer are not claiming that this is the first time this has been done but it is new to us. Good for you, Mr. Lagarde.

* * *

Grassy Crop

The crop is very grassy, and more so than the last few years. The wet condition during the month of March is probably of the most important reason. Johnson grass, canary grass, wild oats and sow thistle grew while cane was still dormant. Fortunately, however, the effect of chemicals is now being seen, and the crop should look better within the next couple of weeks. Most of the grass in the crop is confined to stubble fields with only an occassional dirty plant cane field.

One practice which seems to have materially helped prevent grass in stubble fields was the use of Sinbar following either cane cut for seed or cane cut for early milling last fall. Many growers also used Sinbar following their late cut cane for the mill. Most growers used 2/3 of a pound of Sinbar per acre. Growers are again reminded that there is a federal label for use of Sinbar in all stubble canes this year. According to Mr. E. R. Stamper, Plant Pathology Dept., L.S.U., 1 lb. of Sinbar can be used in stubble fields if 2/3 lb. of the product was used last fall. If Sinbar was not used last fall following cutting, growers should use 1 1/3 lb. per acre in stubble fields.

Although there is no recommendation from the L.S.U. Extension Service for the use of a new chemical called Cotoran, there is a federal label for its use in cane. It is not being sold but manufacturer's representatives have given out large quantities of this material, scattered widely around the belt. This is mentioned for the purpose of information only, and in no way should this be construed as a recommendation of the writer. The material is undergoing tests at the present time by the manufacturer as well as by Dr. Rex Millhollen at the U.S.D.A. Station in Houma, La. Mr. Stamper has also worked with this product.

Basic Cane Breeding

According to Mr. Preston H. Dunckelman, Plant Breeder, U.S.D.A., Houma, La., 30,000 new seedlings have been set to the field from the new basic breeding program recently started at Houma. This is a program initiated several years ago to put new wild blood in the cane breeding program. And although this program is only about five years old, there were a number of selected seedlings last year that could have been easily placed in the commercial testing program. Some of these

(Continued on page 191)

CONTROLLING JOHNSONGRASS AND RAOULGRASS ON DITCHBANKS IN THE LOUISIANA SUGARCANE AREA, 1970[1]

Foliage Applications

Johnsongrass on ditchbanks can be controlled with foliar applications of either MSMA (Monosodium methane arsonate) or dalapon. The type of vegetation that will grow on ditchbanks after Johnsongrass is controlled will vary with the herbicide used, and may be an important consideration when choosing a herbicide. Bermudagrass will usually invade ditchbanks treated with MSMA, whereas various broadleaf weeds and vines will usually invade plots treated with dalapon. Of the two types of vegetation, a Bermudagrass ground-cover is probably more effective in reducing soil erosion and in limiting reinfestation from Johnsongrass seedlings.

To control a heavy infestation of Johnsongrass, 2 to 4 applications of either MSMA or dalapon will usually be required during the first year and approximately 2 applications during the second year. To prevent reinfestation, an annual application or spot treatment will probably be needed thereafter. Make the first application in the spring before Johnsongrass is too tall for proper coverage with a spray boom and when the temperature is above 70°F, usually around April 15. Retreat as required whenever **regrowth** is approximately 24 inches tall.

To control Raoulgrass, spray plants with MSMA when they are approximately 24 inches tall and before the seed mature. Respray as necessary during the growing season to control new plants.

1. **Rate of MSMA.** Apply 4 lb/A (1 gallon if a 4 lb/gal. MSMA formulations is used) in approximately 40 to 60 gallons of water per acre. Most commercial formulations contain a surfactant; therefore, if one of these formulations is used no additional surfactant is needed.

2. **Rate of Dalapon.** Apply 10 lb/A of commercial dalapon in 40 to 60 gallons of water per acre. A suitable surfactant (wetting agent) should be added at the rate of 2 to 3 pints per 100 gallons of spray solution.

Soil Sterilant Applications

To destroy a heavy infestation of Johnsongrass and temporarily sterilize the soil, apply sodium chlorate at 600 lb/A. During the following year, spot treat surviving stools of Johnsongrass by thoroughly wetting the foliage and adjacent ground with a water solution containing 1.5 lb. sodium chlorate per gallon. If Johnsongrass seedlings become abundant, retreat the ditchbank with 300 lb/A of sodium chlorate of spray the Johnsongrass with MSMA or dalapon as suggested above.

Sodium chlorate may be used to control Raoulgrass at approximately 300 lb/A.

NOTE: Sodium chlorate is dangerous to use and it should be mixed with a fire retardent such as calcium chloride (at the rate of 3 to 1 mixture) before it is applied. Personnel applying the material should change clothing after spraying and before the clothes dry. Sodium chlorate is a fire hazard and care should be taken in storing and using the chemical to prevent fire disaster.

[1]Prepared by personnel of the Cooperative Extension Service, Louisiana State University, Baton Rouge, Louisiana. The information presented includes developments from the research of Rex W. Millhollon of the Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana.

For the best weed control

Controls seedling Johnsongrass

Once Johnsongrass forms rhizomes, as shown above, it becomes well established. Left unchecked, it can take over your sugar cane crop. The most effective way to prevent this from happening is to control seedling Johnsongrass with "Sinbar".

Keep your sugar cane fields free of seedling Johnsongrass, as well as annual weeds and grasses, with a single application of Du Pont "Sinbar" in the spring. Or use a split application (fall plus spring).

No additives to "Sinbar" are needed. It kills germinating seedlings up to one inch tall. Also replaces multiple treatments usually necessary with other chemical herbi-

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cide programs. This reduces your application costs.

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JOHNSONGRASS MOSAIC VIRUS TRANSMITTED FROM JOHNSONGRASS TO SUGARCANE SEEDLINGS AND OTHER GRASSES BY APHIDS

By: H. Koike[1]

Despite an extensive search conducted over many years, no mosaic symptoms were observed on johnsongrass in Louisiana until 1967 (5). Since then mosaic-diseased johnsongrass has been seen in many fields in the Louisiana sugar belt.

Forbes, et al., (5) and Forbes and Giamalva (4) questioned and tested the ability of johnsongrass mosaic virus (JGMV) to infect sugarcane. They were unable to transmit the virus to clonal sugarcane varieties; they transmitted the virus to less than 1.0% of the sugarcane seedlings inoculated by the sand-abrasion method.

Tippett[2] transmitted JGMV to 3 of 8 commercial varieties tested (i.e., 11.6% of all shoots inoculated) by using the air-brush method (2); he confirmed the presence of JGMV in the mosaic-diseased shoots by inoculating juice from them to johnsongrass and Rio sorghum seedlings. The symptoms produced by sugarcane mosaic virus (SCMV) strains and JGMV were easily distinguished from each other on Rio sorghum.

Since aphids are of major importance in SCMV transmission in the field (6), it was of special interest to determine whether or not JGMV can be transmitted by aphids. One of the 2 vectors selected, the brick-red sowthistle aphid, **Dactynotus ambrosiae** (Thomas), is primarily an aphid of winter-growing, broadleaf weeds; it is considered the most efficient vector of SCMV (1, 7). Heavy migrations of this aphid to sugarcane after spring applications of herbicides have been observed in Louisiana cane fields (6). The other vector species, the corn-leaf aphid, **Rhopalosiphum maidis** (Fitch), colonizes a wide variety of grasses. It is present in and around sugarcane fields in high populations during the summer and fall, but is not a particularly efficient vector (8). Johnsongrass is among the best host plants for this aphid (3, 6).

Transmission with the brick-red sowthistle aphid. Sowthistle aphids were collected from weeds around the U.S. Sugarcane Field Station. Ten to 15 aphids were placed in small, plastic leaf cages, and were starved for 2 to 4 hours before the cages were attached to mosaic-diseased johnsongrass in the laboratory. The aphids were allowed to feed on the diseased johnsongrass for 24 hours before their leaf cages were transferred to the healthy test plants, which included sugarcane varieties (C.P. 44-101, L. 60-25, La. Striped, N.Co. 310, P.O.J. 234), numerous sugarcane seedlings, and seedlings of johnsongrass, raoulgrass, and Rio sorghum. The aphids fed on the test plants for 24 hours and the leaf cages with aphids were removed. The test plants were maintained in large aphid-proof cages in the greenhouse for 1 to 2 weeks, and transferred from the cages onto benches in the insect-proof greenhouse, after fumigating the cages with nicotine.

Mosaic readings were made periodically up to 6 weeks. The presence or absence of JGMV in the test plants with and without mosaic symptoms was confirmed by inoculating the different-

(Continued on page 190)

[1]Research Plant Pathologist, U.S. Sugarcane Field Station, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana 70360.

[2]Unpublished report by R. L. Tippett, Agricultural Research Technician, U.S. Sugarcane Field Station, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana 70360.

DOWN THE ROW

By: Earl J. Hicks

Stop and go — mostly stop

For the first couple of weeks in March field work was stop and go — mostly stop. However, favorable weather and a general warming trend has brought field equipment out of the stands and into the field. Fertilization work is now in full swing and almost without exception every grower is behind and needs all the dry weather he can get to catch up. Fertilizer recommendations, like other recommendations are very important. When in doubt, never guess! Refer to the recommendations. If still in doubt contact your County Agent, he is the growers closest and fastest source of information.

DON'T say Poison—Say HERBICIDE!

It has been called to the writers' attention that the word "poison" may be giving the sugar cane grower and sugar industry a black eye in regards to pollution. Every grower in the sugar belt knows what is meant by "putting out poison". Do other people not connected with farming know the meaning? Most uninformed people **do not!** Therefore these same uninformed people will almost always associate the word "poison" with the very timely word, pollution. Poison sounds harsh and strong to the average ear. Herbicide sounds better. Growers know and understand the uses of herbicides while most unorientated people do not. With pollution being almost a household word today any word or term that in the **least** suggest a "pollution link" will almost certainly stir up a controversy. Remember, farmers are private candidates for picking up part of the pollution tab. Be careful and conscientious when talking about herbicides. **Don't** say poison — say herbicides!

L 62-86 and C.P. 62-258

Two unreleased varieties are being increased on the League's Secondary Stations throughout the belt. L 62-86 and C.P. 62-258 are up for release this year. Both varieties were tested again in 1969. Data is incomplete at present. In early June the variety release committee will vote on the release or rejection of the two varieties.

L 62-96
It's the Nature of the Brute

Some growers have voiced concern over the sparse stand thus far in L 62-96. L 62-96 does not as a rule put out a lot of early tillers in plant cane. The reverse is generally true in stubble. Getting back to plant care, L 62-96 **will** put out more tillers in May and June but has very seldom in the past equaled a variety like C.P. 61-37 in stalk population. It is the opinion of many who have worked with L 62-96 that the stalks it does put out go to the mill. L 62-96 has a very dense stalk, therefore what the variety lacks in population it makes up for in stalk weight.

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(Continued from page 188)

ial hosts, johnsongrass and Rio sorghum.

Johnsongrass mosaic virus was not transmitted to any of the sugarcane varieties (C.P. 44-101, L. 60-25, La. Striped, N.Co. 310, P.O.J. 234), in 7 different trials. The virus was transmitted to 22.3% of the sugarcane seedlings from 14 different crosses (a total of 33 out of 148 seedlings in 2 tests); symptoms on the infected seedlings were mild to severe and indistinguishable from sugarcane mosaic symptoms on commercial varieties.

In all trials, the sowthistle aphid transmitted JGMV readily to raoulgrass, johnsongrass, and Rio sorghum (44.7%, 42.5% and 20% infection, respectively).

None of the healthy control plants included in the tests became naturally infected with JGMV in the greenhouse.

Transmission with the corn-leaf aphid. Corn-leaf aphids were collected from naturally colonized johnsongrass. Initial trials with use of leaf cages resulted in no mosaic transmission. Therefore, in subsequent trials the aphids were transferred directly from the leaf whorls of mosaic-diseased johnsongrass to the spindle of young test plants. The test plants were maintained in large aphid-proof cages in the greenhouse, and in each cage were placed 2 potted, aphid-colonized mosaic-diseased johnsongrass plants. The plants were left in the cages for 3 to 4 weeks before the cages were fumigated with nicotine, and the plants were transferred directly onto the greenhouse benches. The aphids readily colonized all test plants and virus source plants in the cages.

As was the case with the brick-red sowthistle aphid, the cornleaf aphid did not transmit JGMV to any of the sugarcane varieties (C.P. 44-101, L. 60-25, La. Striped, N.Co. 310, P.O.J. 234). There were low incidences of transmission to the other test plants. Only 1.6% of the sugarcane seedlings from 21 different crosses (4 out of 255 seedlings) became infected with JGMV; the symptoms on these plants were indistinguishable from those of sugarcane mosaic symptoms on commercial varieties. Johnsongrass and Rio sorghum seedlings were infected at the rates of 3.4% and 2.2%, respectively; none of the raoulgrass seedlings were infected.

Although other investigators had successfully transmitted JGMV to sugarcane by mechanical means (4, 5, and Tippett-unpublished data), insect transmission of the virus to sugarcane had not been reported. Results of the tests reported here show that JGMV can be transmitted to sugarcane seedlings and to some weeds common in sugarcane fields by aphids. The aphids used in the tests are natural vectors of SCMV. The brick-red sowthistle aphid was more efficient than the corn-leaf aphid in transmitting JGMV.

It is conceivable from the results obtained that johnsongrass mosaic can become a serious problem to sugarcane in Louisiana when a susceptible variety is present. The source plants and insect vectors for JGMV are abundant in and around sugarcane fields during periods when sugarcane is actively growing.

Summary

Johnsongrass mosaic virus (JGMV) was transmitted to sugarcane seedlings, johnsongrass, raoulgrass and Rio sorghum by means of aphids. The brick-red sowthistle aphid was more efficient than the corn-leaf aphid in transmitting JGMV to the various test plants.

Acknowledgements

The assistance of Mr. L. J. Charpentier, Entomology Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana, in identification of the aphids used in these studies, is gratefully acknowledged.

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—o—

IN WASHINGTON

(Continued from page 183)

food bargain.

"Today there is scant recognition, and perhaps even less appreciation, for the fact that one hour's work buys the average factory worker 3.3 pounds of beef, a half pound more than an hour's work in 1960, and that it gets him 25 per cent more pork, 20 per cent more milk, and 13 per cent more potatoes.

"Have we become so urbanized . . . so estranged from our National Heritage of the land and its gifts . . . that people have begun to think milk comes from cartons instead of cows? Wheat is not just a pretty field to drive by, it is loaves of bread; that bale of cotton means shirts and dresses for little boys and girls; those bins of corn become mountains of bacon and beef and hundreds of consumer products.

If people would only stop to consider the quality and variety of these products, then they would realize that the $3.7 billion spent last year on farm programs came at a bargain basement rate.

—o—

IN THE FIELD

(Continued from page 184)

seedlings had high stalk population, acceptable fiber, and sucrose as high as C.P. 48-103. In the writer's opinion, this basic cane breeding program, which will make use of new blood both wild and noble, offers Louisiana a great potential for yield of cane per acre increase and cold resistance, as well as disease resistance.

Executive Committee Meeting

May 27, 1970

1:30 p.m.

Peltier Auditorium

Francis T. Nicholls College

Thibodaux, Louisiana

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The Sugar Bulletin

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EXECUTIVE COMMITTEE MEETING

May 27, 1970—1:30 p.m.
Peltier Auditorium, Francis T. Nicholls College
Thibodaux, Louisiana

ALL LEAGUE MEMBERS ARE INVITED TO ATTEND

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Vol. 48—No. 16 **May 15, 1970**

The Sugar Bulletin

414 Whitney Bldg., New Orleans, La. 70130
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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN WASHINGTON

By: Horace Godfrey

FARM PROGRAM PAYMENT LIMITATIONS

The discussion as to whether to limit payments made to farmers under farm programs is overshadowing the basic issues involved in farm programs. Congressman Findley recently stated in a letter to all members of the House of Representatives.

"When the farm bill emerges from the Committee on Agriculture I will offer an amendment to establish an annual limitation on payments in the $20,000 range."

"So that Members may see clearly the continued — in fact, increased — need for a limitation of this order, I placed in the Congressional Record today (March 25) a listing of all farmers in the nation who last year received aggregate payments under commodity programs (excluding sugar and wool) in excess of $25,000."

In order to bring the payment limitation issue into clear focus, I present the following facts:

1. The main issue is not payment limitations but should we have farm programs. Apparently both Democratic and Republican Administrations agree on the necessity of having a farm program for many reasons. Among them: 1. Conserve natural resources; 2. Supply an adequate amount of food and fiber; 3. support capacity to produce; 4. support farm income; 5. in sum—in the National interest.

The question then arises, why should the government assist or pay farmers. The answer in part could be as follows:

1. The public cannot afford a shortage of food and fiber—an abundance of food and fiber really is cheaper for the consuming public in the long run.

2. Farmers do not now have legislative authority or ability to organize to bargain as labor does.

3. Decision has been reached by the government (the people) that it is in the National interest to subsidize some industries.

4. Agricultural production is vital to export markets—approximately six billion dollars in value in recent years, amounting to the production from one out of every four acres.

Taking these points into consideration, agriculture cannot exist without government help in an economy where all other industries are assisted in one form or another by government **without any limitations.** If one agrees that a farm program is necessary then the question arises as to **what type** of farm program. The choice then becomes between a farm program calling for domestic production only or for sufficient production to fill domestic requirements and the excess to be used for export. If commodities are to be exported—then they must be priced on a competitive basis. Since the cost of production in the United States is in excess of the cost in other parts of the world, either the producer of the commodity must be subsidized (through payments) or the price to the producer in the market place must cover the cost of production and a reasonable profit with the result that the amount exported would have a government subsidy.

If a farm program is needed; if such program must have government assistance; if a payment type program is the best type advanced to date; and, if the farm program is in the best interest of

(Continued on page 202)

IN THE FIELD

By: Lloyd L. Lauden

Sweet Sorghum For Sugar in Louisiana

Research conducted by Mr. Rouby Matherne of the U.S.D.A. Houma Sugar Station, and Dr. Ray Ricaud of the Agronomy Department of L.S.U. in 1968 and 1969 show that the sweet sorghum variety, Rio, produced about 20 to 23 tons of cane per acre and showed an indicated yield of sugar per acre ranging from 3000 to 3400 pounds. The work was conducted at the Houma Station and on the L.S.U. Perkins Road Farm in Baton Rouge. There were also a few studies conducted on farms in the cane belt.

In the Baton Rouge tests, the sorghum was planted in hills 12, 18, and 24 inches apart on 42 inch rows and thinned to five plants per hill. Three rates of nitrogen, 40, 80 and 120 pounds per acre, were studied on each of the three hill spacings. All plots also received 400 pounds per acre of 0-20-20 fertilizer. The herbicide, Propazine, was used to control grass. There were three types of tests conducted at L.S.U., a maturity test, a yield test, and storage after cutting test.

Dr. John Seip of the L.S.U. Audubon Sugar Mill conducted the sugar analyses. Juice sample analyses were made weekly beginning September 2, 1969 to determine maturity. The last analyses were made November 10th. The yield test was planted April 24 and harvested on September 2, 1969. There were only small differences in yield per acre due to plant population. It was noted that sugar content increased significantly with increase in plant population.

According to Dr. Ricaud, differences in stalks and sugar yields due to nitrogen rates tested were small. There were cases in which the higher rates of nitrogen depressed sucrose content. Sucrose content increased steadily to 16.85 per cent on September 29 and decreased in the same manner to 12.79 by November 10.

In the storage test, sorghum was cut and stored in the heap row for four consecutive days after cutting. Sucrose increased from 16.03 to 17.44 per cent after one day of storage and decreased thereafter to 14.41 per cent at four days in storage. Juice purity decreased materially after one day in storage.

Test conducted by Mr. Matherne of the Houma Station studied effects of date of planting and stages of maturity on yield. Planting dates were March 15, April 15 and May 15 in hills 24 inches apart on 42 inch rows. Four replications of 1/124 acre plots were used in the experiment. Three harvesting periods were used, anthesis (early) hard dough (medium), and one month after hard dough (late). The effects of removal of different plant parts on juice quality and extraction was also studied. The five treatments studies were: the entire stalk above ground, whole stalk with seed heads removed, stalks with seed heads and leaf blades removed, stalks with leaf blades and the upper one-third of the stalk removed, and stalks with leaves but the upper one-third of the stalk removed. Inversion studies were conducted in both 1968 and in 1969. Fifteen stalks samples were used and analyzed from 0 to 5 days after cutting to determine inversion rate. The effects of spacing and fertilizer rates on yield and quality, of juice were also studied by Mr. Matherne in 1969.

According to Mr. Matherne, 20-23 tons per acre can be expected from

(Continued on page 202)

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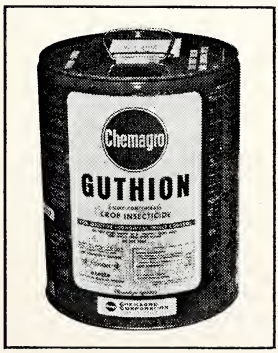

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RATOON STUNTING DISEASE VIRUS: DISTRIBUTION IN THE SUGARCANE PLANT

A. G. Gillaspie, Jr.[1]

Ratoon stunting disease (RSD) virus was reported to occur mainly in the sugarcane stalk[2] or throughout the plant (1, 4). These findings have been re-examined for Louisiana grown sugarcane.

Six varieties of sugarcane were used in this experiment. Two varieties, C.P. 44-101 and Co. 453, were grown in the greenhouse and four varieties, Cl. 41-223, C.P. 36-105, Mayaguez 336, and Louisiana Striped were grown in the field. Only plants with nodal symptoms of RSD were used. The green leaf blades from 4-6 mature plants were ground in a sample mill and the juice was expressed. One stalk chosen at random, of each variety was ground and the juice expressed. The remaining stalks were cut into two bud pieces and placed in tumblers of water in an upright position. After 3 weeks at room temperature in a dark room, the roots were removed, ground in a mortar in 4 volumes of distilled water, and the juice expressed through cheesecloth.

Samples of juice from the leaves, undiluted and diluted to 1/10 and 1/100 with distilled water, the stalks, and the roots were assayed for virus infectivity. Single-bud cuttings of healthy C.P. 44-101 were used for the assays and the cut ends were dipped in the juice samples (2). These cuttings were planted in vermiculite and grown under greenhouse conditions for 4-6 weeks. The young stems were then cut longitudinally with a razor blade to check for juvenile symptoms of RSD. The diagnostic symptom is reddening of the area of the stem just below the growing point. The results of the inoculations with juice from stalks, leaves, and roots may be seen in Table 1.

Stalk juice of all varieties except La. Striped was infectious. The lack of infectivity in the stalk of La. Striped may be due to the random choice of a stalk from a group of stalks, not all of which had RSD.

Leaf juice of all varieties was infectious. The RSD symptom in plants inoculated with leaf juice was in many cases as strong as in plants inoculated with stalk juice. This may indicate the presence of equal amounts of virus in leaves and stalks.

No virus infectivity was found in the root extracts. The lack of virus infec-

[1]Research Plant Pathologist, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana.

[2]Schexnayder, C. A., 1959 Annual Report, U.S. Sugarcane Field Station, Houma, Louisiana.

Table 1. Percentage of infection in infectivity assays of juice of leaves, stalks, and roots of sugarcane.[1]

	Leaf Juice			Stalk Juice	Root Juice	
Variety	No Dilution	1/10 Dilution	1/100 Dilution	No Dilution	1/5 Dilution	Check
Cl. 41-223	67[2]	100	64	100	0	0
Co. 453	95	94	68	100	0	0
C.P. 36-105	37	21	11	73	0	0
C.P. 44-101	100	95	95	100	0	0
La. Striped	26	85	53	0	_	0
M. 336	33	6	0	100	_	0

[1]Healthy cuttings of C.P. 44-101 were used as assay host.
[2]Percentage of infection based on samples of 11-21 plants.

tivity may be due to the immaturity of the roots. A low virus concentration has been reported in roots of N.Co. 310 and Q 28 (1, 4). Immature stalks have been reported to contain lesser amounts of infectivity than mature stalks (4) and the same may be true of immature roots.

RSD is spread on the blades of machinery or cane knives (3). Since RSD-infected leaves contained abundant virus, attempts were made to transmit the virus by knife from infected leaves to healthy stalks. Green leaf blades were removed from mature diseased C.P. 44-101 plants. Several leaves together were chopped 10 times with a knife and the knife was then used to slice once through one end of a single-bud cutting of known healthy C.P. 44-101. This chopping and slicing procedure was repeated until 20 cuttings were cut at both ends. The cuttings were planted in flats of vermiculite. After 6 weeks all of the shoots from these cuttings showed RSD-symptoms. Thus workers might spread RSD by preparing cane for planting by trimming the leaves with a knife and then using the same knife to cut other stalks. It is also possible that the top cutter blades on a harvester might spread RSD in seed cane by cutting through top leaves of shorter infected plants and then cutting the tops of the stalks of taller plants. Sticker chains may also act as virus transmitting tools by crushing leaves and the puncturing stalks.

In summary, RSD-virus is present in high concentrations both in leaves and stalks of infected sugarcane at the time that seed cane is being cut and it is possible to transmit the virus from these diseased leaves to healthy stalks by mechanical means.

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———o———

NEW F.L.B. LOAN POLICY

The Federal Land Bank of New Orleans adopted new loan policies effective January 1st which included the introduction of a totally new concept in farm mortgage lending.

The new policy will offer, both to new and present borrowers, a choice between a variable interest rate loan and a fixed rate loan.

The variable interest rate will be related to the actual cost of operations and will reflect the changes in the price which the Bank must pay for the money it makes available for farm mortgage loans.

In keeping with a policy established over 50 years ago, the Land Bank has introduced this new plan to assure farmers an adequate supply of long-term credit.

In announcing the new loan program, Olin B. Quinn, President of the Federal Land Bank of New Orleans said, "With the continuing uncertainty of the bond market and remembering that a dependable source of credit is of paramount importance to farmers, we view the variable rate loan plan as a more appropriate partnership between our borrowers and the Bank."

Another change in the policy of the Bank will, under certain circumstances, allow present borrowers to take advantage of the new variable rate plan without disturbing their present contract.

The Federal Land Bank of New Orleans serves farmers in Alabama, Mississippi and Louisiana, and currently has over $400 million in loans outstanding to farmers in these three states.

IN WASHINGTON

(Continued from page 195)

the American public, the question arises, "Why limit such payments?" Payment limitations in reality would be: class legislation of the first degree; a direct attack on bigness which is contrary to the principles on which this Nation was built; would be discriminatory since a line must be drawn at some level; would discourage initiative; would be difficult to administer; would cause a switch in production from commodities having programs to those not having programs. The question can be legitimately asked, "If payments to farmers are limited, why not limit payments to defense contractors, mail subsidies, airline subsidies, ship subsidies, payments to land owners for highway right of ways and etc.?"

—o—

IN THE FIELD

(Continued from page 196)

sweet sorghum grown in Louisiana and the crop matures in about 120-130 days. Higher yields are obtained with planting dates after April 15 and when the crop is harvested at the hard dough stage. It was noted that stalks can be harvested about one month after the hard dough stage without an appreciateable loss in sugar. The test showed a rapid inversion of sucrose after the harvest of sorghum and stalks should be milled within 24 hours. Inversion was greatest with immature stalks. It was also found that juice quality was improved by the removal of the seed heads and leaves. Closer spacings than 4 plants every 24 inches along the row did not increase yields. Yields per acre of stalks increased significantly as the rate of nitrogen increased from 0 20 40 lbs. per acre. Higher application of nitorgen did not increase yields.

The American Sugar Cane League requested both Mr. Matherne and Dr. Ricaud to conduct these studies and the League is appreciative of this work.

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RECEIPTS OF OFFSHORE RAWS AT NEW ORLEANS (LONG TONS)

	American	Godchaux Henderson	Colonial	South Coast	Southdown	Supreme	Totals	Cumulative*
1969	495,710	286,739	358,660	52,946	87,363	47,231		1,328,649
1970								
January	24,114	5,905	17,654	None	None	4,921	52,594	52,594
February	37,903	5,000	15,231	None	4,500	None	62,634	115,228
March	55,733	23,061	43,079	2,704	11,235	6,985	140,797	256,025
April	57,247	26,528	32,229	4,510	8,362	4,525	133,401	389,426

*Does not include offshore raws transloaded from ships to barges in the Mississippi River for Industrial Sugars, Inc., and Sucrest. These shipments amounted to 171,434 long tons in 1969.

The January through April 1970 total is 78,570 long tons.

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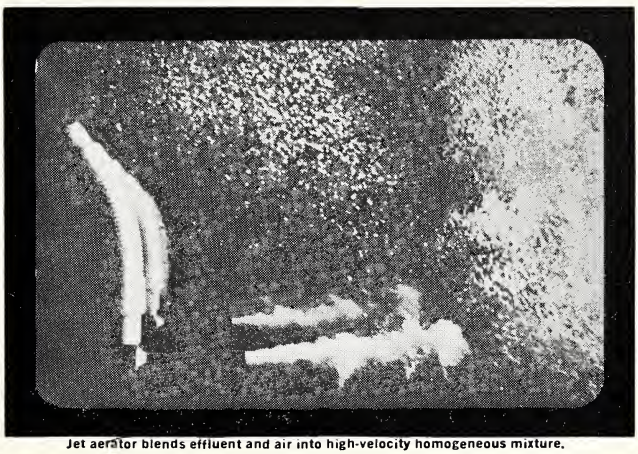

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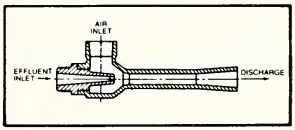

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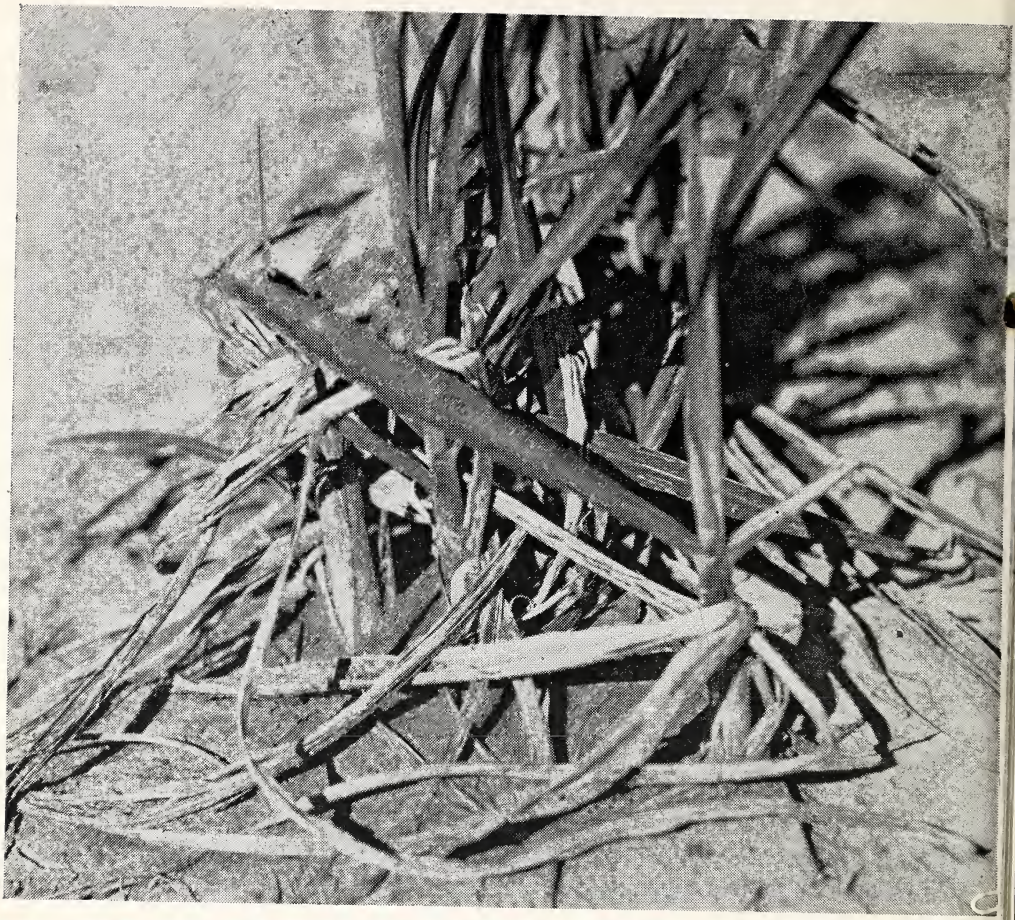

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The Sugar Bulletin

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Vol. 48—No. 17 **June 1, 1970**

The Sugar Bulletin

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Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN WASHINGTON

LOUISIANA STATE UNIVERSITY LIBRARY

By: Horace Godfrey

Farm Subsidies Versus Mail Subsidies

The Vice Chairman of the House Post Office and Civil Service Committee at a press conference recently announced plans to examine policies which permit "subsidized distortions on the part of publications like the Reader's Digest."

Congressman David N. Henderson, D-N.C., attacked the publication for "Systematically distorting the issue of farm subsidies while at the same time it ranks among the largest recipients of federal mail subsidies. As a result it is using its mail subsidy to attack the farm subsidy. Last year alone, Reader's Digest received a $9.4 million subsidy in reduced mail rates, and subsidies to all of the so-called slick commercial magazines totaled more than $431 million."

"Actually a basic question of fairness is involved," Henderson said. "Reader's Digest, like farmers, is subsidized on the theory that it renders a public service. Farmers earn subsidies for cooperating in programs authorized by the Congress and designed to guarantee the public an adequate supply of food and fiber at reasonable prices. The Reader's Digest is supposed to earn subsidies by disseminating fair and accurate information to the public. The size of subsidies to both is determined by how much each contributes to the public interest."

Henderson questioned whether the publication was "fulfilling its part of the bargain. An article in its May issue entitled 'Time to Say **No** to Big Farm Subsidies' is a perfect case in point. This article is replete with outright distortions and mistakes that could have been easily avoided by checking the record beforehand."

The North Carolina Congressman stated: "In the postal rate hearings now in progress in response to the President's request for rate increases, I intend to raise this issue to explore whether we have some duty as guardians of the public purse to insure that the information we are helping publish really is in the public interest.

I am as aware as anyone of the guarantees of freedom of the press contained in the first amendment, and am not suggesting censorship or restrictions on what the press can publish within the limits of the laws governing libel and slander. What I am saying is that if the taxpayers are going to help pay for the distribution of this information, the question arises: Should there be some method of insuring truth and fairness?"

In addition, Henderson said he had wired Reader's Digest to request that it publish an article by him responding to "Time to Say **No** to Big Farm Subsidies" not later than its July issue.

"If Reader's Digest refuses this request, I shall promptly release the article to all other publications and news media expressing an interest in it," he concluded.

IN THE FIELD

By: Lloyd L. Lauden

Contact Committee Thursday, June 18

The Annual U.S.D.A. Houma Station meeting of the Contact Committee of the American Sugar Cane League will be held Thursday, June 18, 1970. The meeting will take place in the Houma Municipal Auditorium, 880 Verrett Street, and will begin at 9:00 o'clock in the morning.

A schedule of the program is included in this article so that growers can know that this meeting will be both informative and interesting.

Morning Session

Opening remarks and announcements	Louis Arceneaux	9:15 - 9:30
Sugarcane Borer Control	R. Mathes L. Charpentier J. Sanford	9:30 - 10:00
Control of Johnsongrass and Raoul Grass	R. W. Millhollon	10:00 - 10:15
Remarks by Dr. Theis, Chief, Tobacco and Sugar Crops Branch, Agricultural Researh Service, U.S. Dept. of Agriculture, Beltsville, Md.		10:15 - 10:30

Coffee Break

Spread, yield effects and strains of mosaic	R. L. Tippett	10:45 - 11:00
Transmission of Johnsongrass mosaic	H. Koike	11:00 - 11:10
Interaction of Pythium and mosaic	H. Koike S. M. Yang	11:10 - 11:20
Stubble decline and soil microorganisms	S. M. Yang	11:20 - 11:35
Mosaic strains and growth potential	J. E. Irvine	11:35 - 11:45
Ratoon stunting disease: Transmission from leaves: Response to tetracycline	A. G. Gillaspie	11:45 - 12:00

Adjourn for Barbecue Lunch

Afternoon Session

Mechanical planting of short seedpieces	G.T.A. Benda R. D. Breaux	1:30 - 1:45
New lines for Louisiana. Progress in sugarcane selection	P. H. Dunckelman R. D. Breaux	1:45 - 2:10
Yields of the '64, '65, '66 Series	R. J. Matherne	2:10 - 2:25
Yields in the outfield tests	H. P. Fanguy M. Giamalva, LSU	2:25 - 2:45
Closing	Louis Arceneaux	2:45

(Continued on page 219)

DOWN THE ROW

By: Earl J. Hicks

Steps in The Louisiana Variety Program

In the months to come an in depth look at the sugar cane variety program will be featured. The program will be discussed step by step. Each phase will be explained so that you, the grower, can see the program just as each member of the variety program sees it. The following outline shows the phases in the Louisiana Sugar Cane Variety Program. Each article will deal with a separate phase.

Louisiana Sugar Cane Variety Program

I. Production of True Seed
II. The Seedling Nurseries
III. The Pre-Replicated Line Trials
IV. The Infield Agronomy Program
V. The Outfield Program
VI. The Variety Increase Program

Finding the variety or varieties which are best suited for production in Louisiana is **at least** a ten year endeavor. The variety development program is a team effort of L.S.U., The U.S.D.A. and the American Sugar Cane League. Testing in Louisiana is done by the Louisiana Experiment Station, the U.S.D.A. and the American Sugar Cane League. Part of cane breeding work is done in Baton Rouge at L.S.U. and part of the work is conducted by the U.S.D.A. sugar cane field station in Houma and Canal Point, Florida. This work is complex, time consuming, exasperating and very often frustrating. Remember we are searching for one good variety in perhaps 300,000.

The people involved in the Louisiana Variety Program are highly trained, have years of experience and know how, and are dedicated. Many were born and raised in Louisiana. Some were reared in or near sugar producing parishes. Their backgrounds are farm orientated which gives them a natural insight to the cane growers needs. Few sugar producing areas of the world have the exhaustive and rigid variety program of Louisiana. Let us now look at the first phase of our vaiety program—The Production of True Seed.

The Production of True Seed

Sugar cane flowers and produces "Tassels" of many individual flowers and each flower contains a **single** true seed of sugar cane. Each seed germinates into a new and different sugar cane variety. It is in this way that the breeder can produce many new sugar cane varieties. The grower cannot do this; he can only reproduce the varieties which he has been supplied.

Sugar cane does not usually flower in the field in Louisiana but sugar cane does flower at Canal Point, Florida where the U.S.D.A. gets its sugar cane seed. Scientists at L.S.U. must rely on light treatments or photoperiods and other treatments to "trick or Fool" sugar cane varieties into flowering. By the use of lights scientists can actually shorten or lenghten day light hours, thus making sugar cane varieties flower.

Agronomists, Pathologists, Physiologists all cooperate with the breeder and suggest to him what varieties should be crossed. Agronomists may suggest crosses which would combine higher tonnage and sucrose. The Pathologists recommend crosses which they find to be disease resistant. Physiologists study and classify varieties for cold tolerance and suggest these as possible parents. The plant breeder, so informed, will make the final decision on what crosses

(Continued on page 216)

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Controls seedling Johnsongrass

Once Johnsongrass forms rhizomes, as shown above, it becomes well established. Left unchecked, it can take over your sugar cane crop. The most effective way to prevent this from happening is to control seedling Johnsongrass with "Sinbar".

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cide programs. This reduces your application costs.

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SUGAR MOSAIC IN LOUISIANA: A PRESCRIPTION FOR A CHRONIC DISEASE

By: R. D. Breaux and H. P. Fanguy[1]

Introduction

Sugarcane mosaic is widespread in some commercial fields in all areas of the Louisiana sugar belt. The situation is especially critical in the Southwestern area. Growers have asked why this is so. The 1969 variety census (3) provides the most likely explanation. In the Southwest, 90% of the crop was planted to the mosaic-susceptible varieties, C.P. 52-68, L. 60-25 and N.Co. 310. Growers in the Southeast and North, however, planted almost half their crop to more resistant varieties.

Mosaic saturation in commercial fields is general throughout the Southwest but there are a few exceptions. For example, at the Oaklawn Division of South Coast Corporation in Franklin mosaic is under satisfactory control. However, the variety picture and history at Oaklawn differs from that of the Southwest in general (4). At Oaklawn, as in the remainder of the Southwestern area, the difficulty began in the variety N.Co. 310. Mosaic, strain H, spread rapidly in this variety and was impossible to control. As the incidence of mosaic increased in N.Co. 310 the disease began to spread in the other susceptible varieties. Planting N.Co. 310 at Oaklawn was discontinued in 1963. A good roguing program in the other varieties permitted the gradual replacement of badly infected fields with less severely infected ones. Mosaic was not eliminated, but a continued roguing program has kept the disease below an economically damaging level.

On the other hand, many growers in the area continued to plant mosaic saturated N.Co. 310. The variety is very tolerant to mosaic, well adapted to the area, and consequently produced very good crops. Mosaic spread into the other susceptible varieties, particularly into C.P. 52-68, and more recently into L. 60-25. Now, these varieties are also approaching mosaic saturation.

Mosaic infection varies widely in different areas of the Louisiana sugar belt, ranging from complete saturation with a high rate of spread in some areas, to practical freedom from mosaic and low rate of spread in others. Since varietal resistance is still the only effective control, we examined the behavior of some of the newest varieties in areas with high and low incidence of mosaic. On this basis, we discussed the probable behavior of similar varieties that will be available to the industry in the next 5 to 6 years.

Materials and Methods

Test field introductory varieties of the C.P. and L. 1965 series were chosen for the field study. The commercial varieties, C.P. 52-68 and C.P. 61-37, were included for comparison. Mosaic resistance data from greenhouse tests had indicated that varieties of the 1965 series ranged from near immunity to mosaic to extreme susceptibility. These varieties were planted adjacent to replicated variety trials at 6 of the Houma outfield variety test locations: Levert St. John at St. Martinville, Ronald Hebert at Jeanerette, A. V. Allain at Baldwin, Oaklawn at Franklin, Bon Secour at St. James, and Georgia at Mathews. The same mosaic-free seed source from the Houma Station was used to establish a single 18 ft. x 36 ft. plot of each variety at each location in the fall of 1968. These plots would later serve to supply seed cane for planting of yield trials in the fall of 1969, so it was not convenient to use replicated plots at each of the locations. In late June, 1969, the total number of stools with mosaic was recorded after maximum spread oc-

[1]Research Agronomists, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana.

curred. Thus, the varieties were planted mosaic free and exposed to field spread only in the fall of 1968 and spring and early summer of 1969. Each location served as a replication of the test so the data could be analyzed statistically to determine: 1) whether significant differences in field spread occurred at the 6 locations; and 2) the degree of resistance exhibited by the varieties in areas of high and low mosaic spread.

erage infection 61.4%) and at Jeanerette (average infection 47.6%) than at the other test sites. Test fields at these two locations were adjacent or near mosaic saturated fields. Mosaic spread was intermediate at Baldwin where the same varieties averaged 20.0% infection. Mosaic at this site is being brought back under control with a program that includes isolation of N.Co. 310, roguing of cane intended for seed, and the expansion of mosaic-

Table 1. Mosaic spread into 6 varieties of the C.P. and L. 1965 series and in C.P. 52-68 and C.P. 61-37 at 6 test field locations.

Variety	Location					
	St. Martinville	Jeanerette	Baldwin	Mathews	St. James	Franklin
	%	%	%	%	%	%
C.P. 65-350	9.9	9.4	0.0	0.0	0.0	0.0
L. 65-69	2.9	2.5	2.4	1.0	0.0	0.0
C.P. 65-392	88.9	52.6	30.0	20.3	8.7	7.1
C.P. 65-312	69.6	20.9	14.7	4.8	4.8	9.6
C.P. 61-37	42.4	43.5	6.0	0.5	3.7	1.4
C.P. 65-357	96.5	79.6	52.9	8.3	19.2	16.7
C.P. 52-68	82.0	97.0	28.1	17.6	15.4	2.8
L. 65-67	98.6	75.5	25.6	14.3	23.2	8.9
Ave.	61.4a[1]	47.6a	20.0b	9.5b	9.4b	7.8b

[1]Means followed by the same letter are not significantly different at the 5% level of probability.

Single-eye seedpiece tests were also conducted on the C.P. and L. 1965, 1966, 1967, and 1968 series varieties in the greenhouse, as described by Breaux and Trippett (2). Three to 4 replicates of 10 plants for each variety were inoculated (1) with a mixture of mosaic strains A, B, D, H and I. Average per cent mosaic of each variety was determined and the varieties separated into groups with the Duncan Multiple Range Test. Greenhouse and field resistance of the 1965 series was compared, and the frequency of resistant varieties in the later series was examined.

Experimental Results

Mosaic spread into most of the varieties was very rapid at two of the Southwestern test fields. It was significantly higher at St. Martinville (av-

resistant varieties. In contrast, at Franklin, Mathews and St. James most varieties had less than 10% mosaic. The average infection was 7.8% at Oaklawn, 9.4% at Bon Secour and 9.5% at Georgia. N.Co. 310 was not grown at these locations and good roguing programs were in effect.

Mosaic spread into the 8 varieties is shown in Table 2. The table shows mosaic infection in each variety when 1) artificially inoculated in the greenhouse; 2) grown under conditions of medium to heavy field spread; and 3) grown under conditions of light field spread.

In the green house test, one of the 1965 varieties (C.P. 65-312) was equal in resistance to C.P. 61-37; 2

(Continued on page 214)

Table 2. Mosaic infection in the field and in the greenhouse for 2 commercial and 6 unreleased varieties of the C.P. and L. 1965 series.

Variety	Greenhouse test	Outfield test (Medium to heavy spread)[1]	Outfield tests (Light spread)[2]
	%	%	%
C.P. 65-350	0.0a[3]	6.5a	0.0a
L. 65-69	2.0a	2.9a	0.0a
C.P. 65-392	10.0 b	57.2 c	12.0a
C.P. 65-312	18.0 c	35.1 b	6.4a
C.P. 61-37	18.0 c	30.3ab	1.8a
C.P. 65-357	55.0 d	76.3 c	14.7a
C.P. 52-68	82.0 e	69.0 c	11.9a
L. 65-67	85.0 f	66.6 c	15.5a

[1]Includes St. Martinville, Jeanerette, Baldwin.
[2]Includes Mathews, St. James, Franklin.
[3]Means in the same column followed by the same letter are not significantly different at the 5% level of probability.

varieties (C.P. 65-357 and L. 65-67) were more susceptible; and 3 varieties (C.P. 65-350, L. 65-69, and C.P. 65-392) were more resistant. C.P. 65-350 and L. 65-69 showed exceptional resistance in the greenhouse, even more resistant than the highly resistant C.P. 47-193 (data not shown).

In the field, no significant differences in spread into these varieties could be measured in light spread areas. Most of the varieties, with the possible exception of the most susceptible ones, C.P. 65-357, C.P. 52-68, and L. 65-67, took little or no mosaic and could be rogued at these locations. This was especially true of the moderately resistant C.P. 61-37 and C.P. 65-312, as well as the more resistant varieties.

In the medium and heavy spread areas on the other hand, varieties differed significantly in mosaic resistance. The incidence of mosaic in C.P. 65-350 and L .65-69 was only 6.5% and 2.9% respectively, even under these conditions and, as greenhouse data incated, they were significantly better than C.P. 61-37. C.P. 65-392 had more mosaic in the field than in the greenhouse and was the only variety in the test for which greenhouse and field data did not agree. C.P. 65-312 and C.P. 61-37 were intermediate in mosaic susceptibility and, as in the greenhouse they were not significantly different. However, these two moderately resistant varieties took over 30% mosaic in the high spread areas. C.P. 65-357, C.P. 52-68 and L. 65-67 were significantly more susceptible to mosaic than C.P. 61-37, and would probably become saturated with mosaic in a very short time under these conditions.

Greenhouse tests for mosaic resistance were conducted for 100 other varieties in agronomic yeild trials that have not yet been transferred to outfield locations (Table 3). Forty-five of these were significantly less resistant than C.P. 61-37 in the greenhouse. Fifty two varieties were not significantly different from C.P. 61-37 and only 3 varieties were significantly more resistant than C.P. 61-37. Note that every C.P. variety that could be released to growers before 1976, and every L. variety that could be released before 1975 are included in these tests.

Discussion

Areas of high and low mosaic saturation and intense and light field spread are apparent to all who travel to different areas of the sugar belt. However, the reasons for and implications of this phenomenon are not completely understood.

In heavy spread areas, mosaic control is impossible in susceptible varieties like C.P. 65-357 and L. 65-67. They often take over 70% mosaic in a single season. Growers in these areas already recognize the futility of mosaic control in their susceptible commercial varieties. Any susceptible variety intend-

Table 3. Mosaic resistance of new C.P. and L. varieties compared to C.P. 61-37 in greenhouse experiments.

Series tested	Total varieties tested	Mosaic Resistance		
		Less than[1] C.P. 61-37	Like[1] C.P. 61-37	Better than[1] C.P. 61-37
	no.	no.	no.	no.
1966 C.P.	15	9	4	2
1966 L.	3	3	0	0
1967 C.P.	19	7	11	1
1967 L.	18	8	10	0
1968 C.P.	45	18	27	0
Total	100	45	52	3

[1]When means are grouped at 5% level of P by Duncan Multiple Range test.

ed for this area will have to be grown virtually saturated with mosaic and must be sufficiently tolerant after saturation to compete with the high yielding N.Co. 310. Susceptible, intolerant varieties should not be released, of course, or recommended in these areas.

On the other hand, the data suggest that mosaic could be controlled, at least for a time, in susceptible varieties in areas of light field spread. Field spread in new varieties, however, should be carefully compared to other susceptible varieties in the area and the release of a more susceptible variety should be avoided. Furthermore a grower in this area should seriously consider the adverse effect on his overall mosaic situation of increasing N.Co. 310, or any similar very susceptible variety. In particular he should consider the effect that mosaic saturation would have on other susceptible, but intolerant varieties that he might be growing.

How will moderately resistant varieties such as C.P. 61-37 or C.P. 65-312, perform in areas of light and heavy field spread? These data indicate that they could be kept practically mosaic-free with a minimum of effort under conditions of light field spread. However, in our field experiments in heavy spread areas, C.P. 61-37 and C.P. 65-312 took over 40% mosaic in a single year. Commercial plantings of first and second stubble cane had from 50 to 80% mosaic at these locations. Moderately resistant varieties will become badly infected with mosaic in these areas if the saturated susceptible varieties are not gradually replaced. This is inevitable if growers assume that introduction of clean seed, isolation, and roguing would accomplish as little in these moderately resistant varieties as it accomplishes in the more susceptible varieties in the area.

However, we found some evidence in commercial plantings of C.P. 61-37 that isolation and roguing might be more effective in mosaic control in a moderately resistant variety. There was only 20% mosaic in commercial plantings of 20 acres or more in C.P. 61-37 plant cane at Jeanerette. Infection was much lighter than in the small stubble plots that provided seed cane for these plantings. Perhaps a combination of recovery and self-buffering in the larger plantings served to reduce the rate of spread and the amount of mosaic in the variety. At Baldwin, we found only 3.4% mosaic in C.P. 61-37 first stubble cane, and only 4.2% in plant cane, when planted less than 2 miles from the nearest badly infected cane.

The data also indicate that highly resistant varieties like C.P. 65-350 and L. 65-69 would take little mosaic even in heavy spread areas. Mosaic could be controlled in these varieties with little or no effort. It should be stressed, however, that these varieties have not been tested sufficiently to determine their suitability as commercial canes and either variety or both could have serious defects. Furthermore, only

(Continued on page 216)

these 2 varieties and 3 others that could be available to the industry in the next decade showed a very high degree of resistance in the greenhouse. It is unlikely that the industry will have a full complement of highly resistant varieties for some time to come.

Summary

Sugarcane mosaic is present throughout the Louisiana sugar belt. The situation is most critical in the Southwestern area. This situation can only be changed by a shift from susceptible to more resistant varieties. There are as yet no acceptable, highly resistant, commercial varieties for this area. The frequency of highly resistant varieties in infield and outfield tests is also low. A new moderately resistant variety, C.P. 61-37, is being increased in the area and there is also a large number of moderately resistant varieties in the test program. The data and past experience in the field indicate that mosaic might be controlled even in areas of heavy spread if 1) they replace enough acreage of more susceptible mosaic saturated varieties to permit some buffering; and 2) careful attention is given to introduction of clean seed, isolation and roguing cane intended for seed.

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DOWN THE ROW

(Continued from page 209)

to make.

At L.S.U., Drs. S.J.P. Chilton (who originally organized and set up the breeding program there) and E. D. Paliatseas produce approximately 200,000 seeds from about 100 crosses each year for the L.S.U. variety program. At Canel Point, Florida Dr. N.I. James produces approximately 300,000 seed from about 150 crosses for the U.S.D.A. variety program. Mr. C.O. Grassel produces additional seed from crosses with wild sugar cane varieties.

In the next article we will look at the first step on how these hundreds of thousands of new varieties are screened to get out the few that you, the grower can use.

—o—

New Orleans Bank For Cooperatives Lowers Interest Rate

The Bank's Board of Directors recently approved a reduction of 25 points in the Bank's present interest rate. The new rate of 8.50 per cent will apply to all loans both outstanding on June 1, 1970 and granted on or after that date until further change is made.

While interest rates have not decreased as much as some economists predicted, the June issue of debentures cost the Bank 7.80 per cent, including commission. Some outstanding debentures are still costing 8.75 per cent, but the average rate is down to 8.13 per cent. Because of this favorable trend the Bank felt justified in decreasing rates.

As stated many times, it is the Bank's policy to adjust rates as the cost of money fluctuates.

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STUDIES TO DETERMINE THE EFFECT OF TETRACYCLINE ANTIBIOTIC ON THE RATOON STUNTING DISEASE (RDS) OF SUGARCANE

R. J. Steib and D. M. Tantera

Recent studies in Taiwan have indicated that the white leaf disease of sugarcane is associated with a Mycoplasma (PPLO) organism. The disease has long been thought to be caused by a virus.

It has been suspected that RSD may be associated with a Mycoplasma (PPLO) organism. Tetracycline antibiotic has been found to have some effects on diseases of plants which are associated with Mycoplasma organism. To investigate this possibility, studies using Tetracycline antibiotic were conducted during the fall and winter seasons of 1969/1970.

In these studies, single eye seed pieces of varieties C.P. 44-101 and C.P. 36-105 were treated with various concentrations of Tetracycline solution for different periods of time. After the treatment, they were planted on sterilized soil in 4 and 6 inch pots in the green house maintained at 75°F. Twenty seed pieces were used for each treatment. After 12 weeks, those which had germinated were examined in the immature nodal region near the growing point for a pink discoloration of the tissue; a method used to determine if the plant is infected with RSD.

Treatments which were used in the experiments and the results of examinations for RSD symptoms are presented in the following Tables.

Table 1 shows the results of an experiment in which single-eye seed pieces of diseased and disease-free C.P. 44-101 and C.P. 36-105 were dipped for 4 hours in either 200; 400; 800, or 1200 ppm Tetracycline solution. As check, similar material was treated in the same way with distilled water. After treatment, they were planted in the greenhouse for observation.

Table 2 presents the result of a similar experiment in which single-eye seed pieces were dipped for 8 hours in either 200 or 400 ppm of Tetracycline solution before planting in the greenhouse.

Table 3 shows the results of the experiment in which single-eye seed pieces of diseased and disease-free C.P. 44-101 and C.P. 36-105 varities were cut under either 200 or 400 ppm solution of Tetracycline, and then left

Table 1. Number of plants with RSD symptom and total number of plants examined from experiment in which single-eye seed pieces were dipped for 4 hours in various concentration of Tetracycline Hydrochloride solution.

Variety	Diseased (D) Diseased Free (DF)	Tetracycline concentration (ppm) 200	400	800	1200
C.P.44-101	(D)	11/14	13/13	19/19	9 /10
Check*	(D)	19/19	19/19	10/10	19 /19
C.P.44-101	(DF)	0/15	0/ 7	0/ 7	0 / 6
Check*	(DF)	0/16	0/17	0/11	5**/14
C.P.36-105	(D)	18/21	20/20	8/ 8	10 /12
Check*	(D)	22/22	20/20	10/10	13 /13
C.P.36-105	(DF)	0/17	0/21	0/11	0 /13
Check*	(DF)	0/21	0/20	0/22	0 / 7

* treated with distilled water
** symptoms are not clear cut.

(Continued on page 218)

for another 5 minutes under the solution. After the treatment they were planted in the green house for observation. As a check, similar materials was treated in the same way with distilled water.

Table 4 gives the results of the experiment in which seed pieces were planted on sterilized soil in the green house, and once a week were drenched with either 200,400 or 800 ppm solution of Tetracycline. The check was watered with tap water every day. The plants were watered with tap water to maintain growth besides being drenched with Tetracycline.

From the data presented above it appears that Tetracycline Hydrochloride solution in the concentrations and period of treatment as were used in these experiments does not have any effect on RSD symptom development in the plants of the two varieties used.

Further experiments with Tetracyclines as well as attempts to grow the organism in PPLO medium are underway.

Table 2. Number of plants with RSD symptoms per total plants examined from treatment of dipping single-eye seed pieces for 8 hours in Tetracycline Hydrochloride solution of 200 and 400 ppm.

Variety	Diseased (D) Diseased free (DF)	Concentration ppm) 200	400
C.P.44-101	(D)	13/13	6 / 7
Check*	(D)	19/19	19 /19
C.P.44-101	(DF)	0/ 7	0 / 8
Check*	(DF)	0/17	0 /19
C.P.36-105	(D)	20/20	17 /17
Check*	(D)	20/20	17 /17
C.P.36-105	(DF)	0/21	0 /14
Check*	(DF)	0/21	2**/18

* treated with distilled water
** symptom not clear cut.

Table 3. Number of plants with RSD symptom per total number of plants examined from treatments in which single-eye seed pieces were cut under Tetracycline Hydrochloride solution of various concentrations.

Variety	Diseased (D) Disease-free (DF)	Concentration (ppm) 200	400
C.P.44-101	(D)	7/19	18/18
Check*	(D)	16/16	19/19
C.P.44-101	(DF)	0/17	0/20
Check*	(DF)	0/23	0/22
C.P.36-105	(D)	15/18	17/17
Check*	(D)	14/14	15/15
C.P.36-105	(DF)	1/20	0/18
Check*	(DF)	0/18	0/19

* treated with distilled water

Table 4. Number of plants with RSD symptom per total number of plants examined from treatments in which growing plants were drenched once a week with Tetracycline Hydrochloride solutions of various concentrations.

Variety	Diseased (D) Diseased-free (DF)	Tetracycline concentration (ppm) 0*	200*	400*	800*
C.P.44-101	(D)	13/13	12/12	12/12	13/13
C.P.44-101	(DF)	0/19	0/15	0/15	0/15
C.P.36-105	(D)	9/ 9	11/11	14/14	15/15
C.P.36-105	(DF)	0/11	0/ 9	0/ 5	0/ 9

** watered with tap water everyday

* watered with tap water everyday, once a week drenched with Tetracycline Hydrochloride solution.

IN THE FIELD

(Continued from page 208)

Highlighted on the program will be new varieties and diseases of sugar cane. Of special interest will be the report on new blood lines in the cane breeding program. This basis or new blood introduction to the cane breeding program offers the Louisiana sugar cane industry a great potential for increase in yields of cane per acre as well as freeze damage resistance.

A special treat for the committee will be the visit of Dr. Thomas Theis, Chief, Tobacco and Sugar Crops Branch, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C.

Dr. James Irvine, Supt. of the Houma Station and Mr. Louis Arceneaux, Chairman of the committee invite all cane growers and others interested in the sugar industry to attend this meeting.

Proportionate Shares

On May 21, Clay Terry presented testimony on behalf of the American Sugar Cane League, The Florida Sugar Cane League, and the Louisiana Farm Bureau Federation, at the Annual Proportionate Share Hearing in Miami, Florida.

The purpose of this hearing was to hear testimony pertinent to establishing proportionate shares (cane acreage allotments) for the 1971-crop in Louisiana and Florida.

Mr. Terry recommended that 1971 acreages be increased 15% above the 1970 level. This would mean 330,061 acres for Louisiana and 205,988 acres for Florida.

In addition, the industry requested 150 acres to be set aside in Louisiana and 100 Florida for new growers.

The recommended acreage set aside for handling appeals and corrections was 150 acres in Louisiana and 100 acres in Florida.

The Department was asked to issue the 1971 Proportionate Share Determination as early as possible and no later than August 1, 1970. It was urged that the deadline for requests for new-producer shares be made no later than September 1.

It is hoped that the Government will allow this increase. This recommendation seems very reasonable to us.

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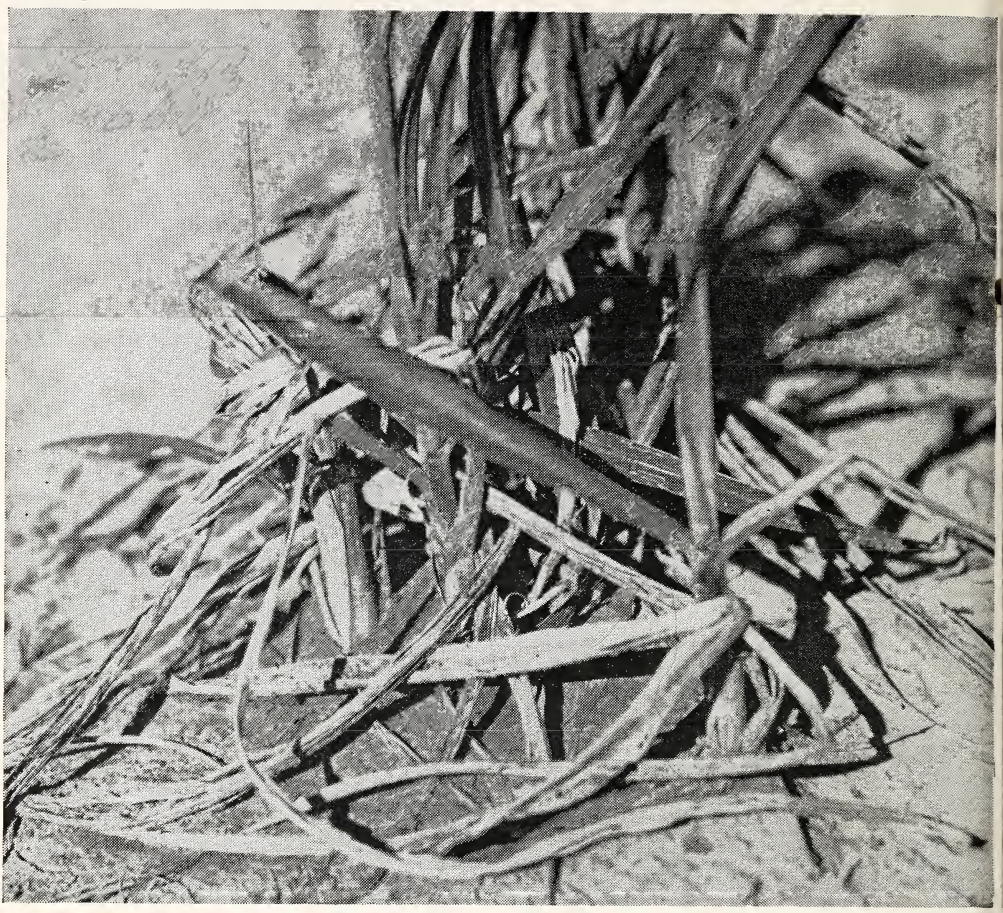

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The Sugar Bulletin

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Vol. 48—No. 18 **JUNE 15, 1970**

The Sugar Bulletin

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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We stand for the encouragement of Home Industries as against Foreign Competition

IN WASHINGTON

By: Horace Godfrey

1971 Agricultural Appropriations Bill

On June 4th, Congressman Whitten, Chairman of the Sub-Committee on Appropriations for USDA for the fiscal year beginning July 1, 1970. In reporting the bill, Chairman Whitten and his Committee made some detailed comments of interest to all Americans. Space does not permit inclusion of all the comments but since they were listed under many sub-headings, we are including the major sub-headings and some quotes.

The Impact of Agriculture—The Department of Agriculture, identified with 5.1 per cent of our people of the farm, in reality represents the 94.9 per cent of the non-farmers more closely than does any other department, for it represents the source of food, clothing and shelter for all Americans, and further, represents the largest individual market for labor and industry. **Public Health and Safety**—We might term this "an appropriation for protection of the public health," for it carries funds for inspection of the meats and vegetables which go on our tables. Funds are included in this bill to provide for inspection of 100 per cent of the red meat marketed in the United States for the first time in our history. This same goal will soon be reached for poultry. **The Economy**—Or perhaps we should term this a bill "for the protection of industry and labor."

(Continued on page 230)

THOMAS THEIS

It is with sincere regret that we record the death of Dr. Thomas Theis on May 30. Dr. Theis and his wife, Ruth, were killed in an automobile accident near Elizabeth City, North Carolina, while returning home from a vacation. Dr. Theis became Chief of the Tobacco and Sugar Crops Research Branch of the U.S. Department of Agriculture in Beltsville, Maryland, in 1961. Dr. Theis came to Beltsville from the Federal Experiment Station in Mayaguez, Puerto Rico. In Puerto Rico his work involved pathological investigations on a number of plants including bananas, cereals, and vegetables. He also did research on the effect of stem rust on wheat, oats, and barley.

Dr. Theis received both his bachelor's degree and doctorate from the University of Wisconsin. His untimely death at the age of 52 has brought an end to a successful career as a research administrator. During his administration, support for sugarcane research programs were extended considerably through his coordination of industry needs and research efforts.

IN THE FIELD

By: Lloyd L. Lauden

Pollution

Everyone knows pollution is bad and something must be done about it. It is a most important problem and the Louisiana sugar industry has already started control measures to do their part to help in the overall problem. Everyone of us as well as all industries and agriculture add in some way to this thing called pollution. However, well meaning civil servants as well as many first class politicians and some who are not, are using the word pollution to beat the drums to get recognition.

Pollution will be in the news for a long time. The ball is rolling. Many foolish things will be done. Some industries will be forced to do very rediculous things for very little or no reason. It will take a long time before the general public will be able to look at the problem of pollution in its proper prospective. There is presently too much bally-hoo on the subject and everyone wants to ride on the clean-up wave. After a while and when most of the flagrant misuse of our environment is corrected, the public will come to know and realize that some pollution must be tolerated and is necessary to keep this great standard of living we in America enjoy. It is never pointed out by those beating the drums for pollution abatement that poor and under developed nations suffer very little from pollution and that their sufferings are disease, poverty and starvation.

American agriculture plays an important role in the high standard of living in the U.S. Science, technology, and the American know-how have provided food, fiber, and shelter at prices that everyone can afford and still have time for leisure and recreation. Pesticides have materially helped to make these things possible. Without them food would be much more costly, scarce, and of poor quality. There have been some problems with pesticides. However, most are local in nature and are usually corrected. Food production per unit of land is high. It is a fact that one farm worker provides food for himself and about 50 other people. An amazing thing is that this is on about 80 million acres less than in 1950.

The question has been asked whether pesticides have greatly affected wildlife. The answer is no. There is much more game today than 30 years ago in spite of pesticides, expanding cities, roads, airports and industrial spreads over the countryside.

Agriculture has helped in pollution abatement in many ways which are not recognized. Grass and trees are planted almost immediately following a forest fire. This stops both wind and water errosion which causes air and stream pollution. Farmers use terracing, contour rows, and field grading to prevent run-off. This helps to keep clean, clear streams for fishing and recreation. Agriculture has created some problems and these must not be swept under the rug. On the other hand, we must control these problems and insist that regulations and control of pesticides be based on sound information and the good and the bad from them to be carefully evaluated.

On the subject of pesticides, cane growers should do everything possible

(Continued on page 230)

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You *can* stop the gluttonous sugarcane borer that weakens stalks, decreases the amount and purity of juice, and lowers sucrose content.

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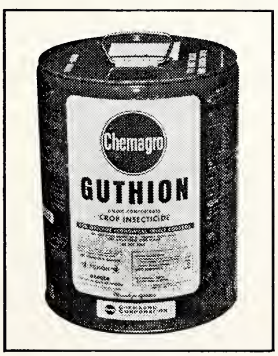

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Higher yields of sugar cane result when you control weeds and grasses with "Sinbar". This Louisiana field was treated with "Sinbar" in the fall. Picture taken in March shows the excellent control of winter annual weeds in the row.

cide programs. This reduces your application costs.

"Sinbar" is labeled for use in first-year stubble cane as well as in plant cane. It's an easy to use wettable powder that mixes readily with water. Get the most weed control for your money. Order your supply of Du Pont "Sinbar" from your local dealer today.

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CANE TALK

By: Howard Robichaux

Crop Condition

Since there was very little rain in the month of April, farmers were able to do a tremendous amount of work in the field. Many or perhaps, all of the growers throughout the cane belt completed the fertilizing operations before May 20. Several weeks ago the stubble crop appeared to be grassy. Yet the excellent weather conditions allowed farmers to apply their herbicides properly, thereby, achieving satisfactory weed control in the fields. Cane is now a dark green color, fields are fairly clean, and this season is off to a good start.

L.60-25

A few weeks ago in my last article, I reported to you that plant cane and first stubble of L.60-25 was showing well and I am happy to say that it is continuing to do so. Yet, you will recall that second year stubble of this variety gave cause for concern throughout the cane belt. In the last few weeks a considerable amount of this second year stubble L.60-25 has improved immensely. In fact it has done so well, that plantations such as Oaklawn, Billeaud, and Armant, who had expected to plow out much of the L.60-25, are now planning to keep all or most of it. Much of L.60-25 was shaved and it improved considerably since this was done. Yet, in some places this variety improved without shaving. There is still some weak second year stubble L.60-25 around and some has been plowed.

New Varieties Observed For Mosaic

For the past three weeks I have been observing closely how three of our newer varieties of sugar cane are acting as far as mosaic disease is concerned. I will discuss each as follows:

CP. 61-37

This variety is rated moderately resistant to mosaic disease. In most instances this variety has lived up to its rating. In many areas I have found that no attempt has been made at roguing this variety. If it is not rogued at this time, in the next two to three years, it might well be compared to some of our more susceptible commercial varieties.

L.62-96

This variety is rated moderately susceptible to mosaic disease. Since this variety was released only last year, mosaic disease has not yet become a big problem throughout the industry. There are several places known as "mosaic hotspots" in the State. Here the variety has become badly infected and cannot be rogued. Attempts to rogue seed cane should be made now and some thought should be given to isolating and buffering with CP. 61-37 at the time of planting.

L. 60-25

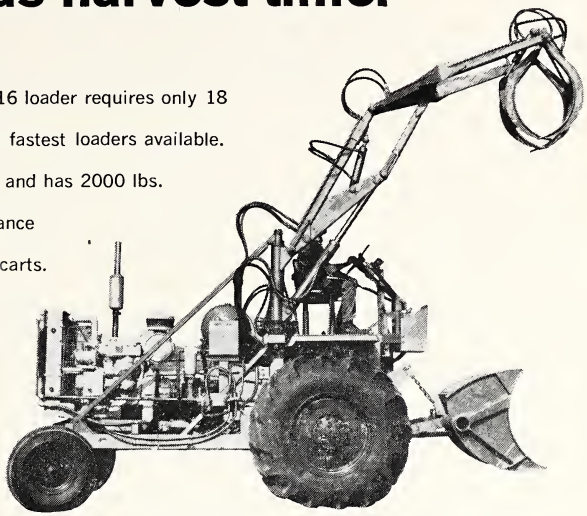
This variety is susceptible to mosaic disease. There are only a few areas in the State where it is economically feasible to rogue this variety. There is a need for better understanding as to a variety's susceptibility and resistance to mosaic disease on the part of the farmer. Varieties such as C.P. 61-37 could be kept farily free from mosaic and be used as a buffer in seed plots.

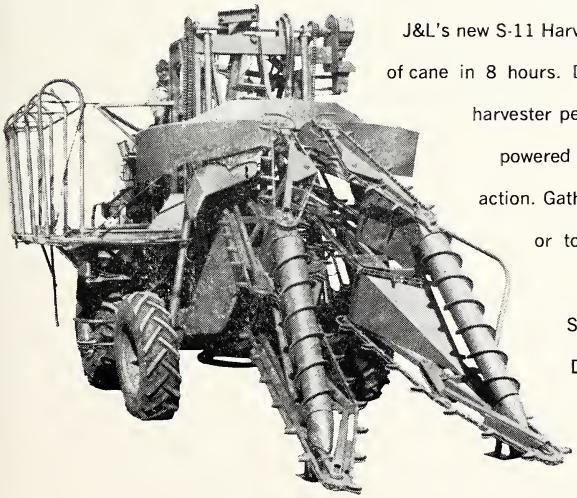
Roguing Classes Progress Well

After seven class meetings with nine hardworking Franklin High School boys chosen by teachers Pat McCoin and Harold Harris, I can say that these boys have learned some important points about roguing sugar cane. The final class meeting was Saturday, May 9, at the farm of Ronald Hebert. Dr. Dick Breaux of the Houma Experiment Station was here to observe and comment on any points I may have missed while working with these young boys. We hope that the boys are successful in their summer jobs so that this program can be expanded to more areas in the State next year.

New J&L loader/harvester team speeds harvest time.

A complete loading cycle for the J&L L-16 loader requires only 18 seconds, making this loader one of the fastest loaders available. It loads up to 75 tons of cane per hour, and has 2000 lbs. lift capacity. Full 12 ft. 6 in. grab clearance permits use with larger, higher field carts. Hydrostatic drive eliminates clutch problems, reduces maintenance. The L-16 is powered by a Caterpillar Model 3145 Diesel engine and power steering is included as standard equipment. Optional 4-wheel drive available.





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IN WASHINGTON

(Continued from page 223)

The producers of agricultural products spend nearly $30 billion a year for goods and services to produce crops and livestock; another $12 billion a year for food, clothing, drugs, furniture, appliances, etc. **Nutrition**—This bill could be called "the peoples bill" because of its contribution to human nutrition and aid to those who for one reason or another do not have an adequate diet. Last year the Congress appropriated a total of $610 million, an increase of $270 million, for food stamps. For 1971, the Committee has restored the special milk program which will provide about 3 billion half-pints of milk to about 17 million schoolchildren. Included in the bill is $200,000,000 for free and reduced-price lunches for an estimated 6.6 million needy children.

Agriculture Remains Basic—In the opinion of the Committee, the growing tendency to consider agriculture as a less essential part of our national economy, and to reduce funds needed for its continued support, threatens our Nation at home and abroad. History teaches us that the food-deficit countries of the world started on their decline by failing to give adequate attention to the protection and development of their basic natural resources. **Low farm income triggers financial depression**—It has been stated that the seeds of the Great Depression were sown in the agricultural depression of the 1920s which followed the First World War. The failure to maintain farm exports or to support farm prices and thus to maintain farmers' purchasing power weakened banking and business. Past achievements of **American Agriculture**—The efficiency of American agriculture has been a blessing to the consumers of the world. It has provided a plentiful supply of wholesome and nutritious foods which U.S. consumers have come to accept and take for granted. Because of the remarkable achievements of American agriculture, the people of the United States for years have enjoyed a standard of living never before attained anywhere in the world.

—o—

IN THE FIELD

(Continued from page 224)

to prevent putting Guthion in streams during the coming borer control program. Warn pilots that fish kills are bad, and these create a poor image for the sugar industry.

—o—

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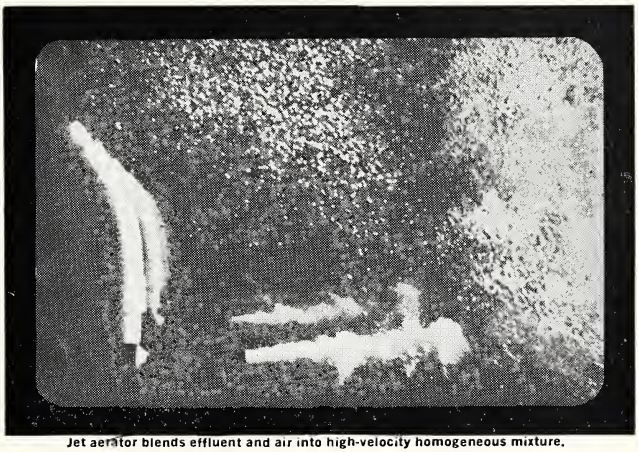

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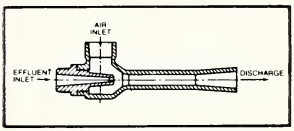

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The Sugar Bulletin

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Vol. 48—No. 19 **JULY 1, 1970**

The Sugar Bulletin

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN WASHINGTON

By: Horace Godfrey

Food Costs — Farm Prices

Publication of a new edition of "Food Costs—Farm Prices" has been issued by the Committee on Agriculture, House of Representatives. This revision comes at a time when decisions are being made which could have a vital and lasting effect on American agriculture. Legislation which has shaped farm price support programs since 1965 will expire at the end of this calendar year unless some action is taken by the Congress.

In the absence of action and if the 1965 legislation is permitted to expire, the old 1958 Farm Act would automatically go into effect with a return to conditions that led to a build up of a surplus of several agricultural commodities, bulging warehouses and depressed farm prices. The facts and figures presented in the revised edition show clearly that even with the assistance of the 1965 Act, farmers in the United States still are not getting a fair return on their investment of time, labor and money.

The study shows for instance, that notwithstanding higher prices received by farmers in 1969 for some commodities, their average return for 1967-1969 was still 3% below the comparable three year base period of 1947-1949. However, in this same twenty year period, prices paid by consumers for food at retail level increased 48%. The net income of farmers in 1969 was only 3% above the 1947-1949 base period while the hourly earnings of manufacturing workers have increased by 131% and corporate dividends by 235%.

Another evidence of the disparity in farmer—non-farmer income is reflected in the fact that the average American family currently is spending only 16½% of its income after taxes for food. A year ago they spent 17%. Twenty years ago it was 22.2%. Compare this with Western Europe and other areas . . . . where in Western Europe the average family spends approximately 25% and the Soviet Union almost 50% and in Asia an estimated 75%. The ability of American agriculture to feed and clothe the 300 million people or more who will inhabit the United States by the year 2000 can be assured only if the farmer gets a return sufficient to use efficient, modern equipment, meet his labor costs and use necessary fertilizers, pesticides and other chemicals.

It must be kept in mind that an urban-oriented Congress determines what is and what is not to be done in the enactment of farm legislation. Out of 435 members of the House of Representatives, only 41 come from districts which have 25% or more of their people living on farms Only 83 have as much as 15% of their people living on farms. Twenty-one states do not have even one district with as much as 15% farm population. Therefore, in order to get farm legislation (including sugar legislation, which will be considered in calendar year, 1971) supportt must be obtained from urban Americans and their representatives in Congress.

IN THE FIELD

By: Lloyd L. Lauden

The cultivation of the present crop has been completed. There is very little cane growers can do between now and harvest that will affect the yield of this crop. The crop has been laid-by.

Although there is much less grass in the stubble cane now than six weeks ago, stubble cane is still grassy. There is also more Johnson grass in plant cane this year than in recent years. There are several reasons for this, but probably the most important reason is the wet conditions in March which prevented cultivation. Without the chemical weed control program, this crop would have been completely taken over by weeds and grass and probably would have been a failure. In general, the grass in plant cane will not greatly affect yields of cane this year but will produce seed which will cause considerable trouble next year.

Growers are again reminded that L. 62-96, the variety released last year, rarely produces many suckers in plant cane. In spite of this, however, L. 62-96plant cane has produced good yields during the years this variety was being tested before release. The barrel is large and most of the suckers produced make millable stalks. The variety generally produces a heavy stand in stubble cane.

Growers in the Teche, who received seed cane of L. 62-96 trucked in from West Baton Rouge Parish, should not try to judge the variety by the stand received this year. The seed was badly lodged and was again blown down by a five inch rainstorm the night before it was cut. The cane was badly butchered while being cut and transloaded. It was then dumped on a concrete pad, rebundled and re-handled before arriving at the farm. All of this handling causes breaks and bruises which help to produce poor stands. This is always noticed in the Outfield Test Plots when cane is hauled in from other areas. In fact, when seed is hauled in from other areas, the variety is never placed in the experiment until the next year when local seed is available. Stands from seed hauled in from other areas are generally not as good as stands from seed taken locally.

Wage Hearing

The U.S.D.A. wage hearing was held in Houma, June 5, 1970. Mr. P. J. deGravelles, Jr., a Franklin, La., cane grower, who is Chairman of the League Employee Relations Committee, testified on behalf of the American Sugar Cane League and recommended no change in wage rates for field workers. He, also, spoke for the Louisiana Farm Bureau Federation.

Dr. Joe R. Campbell, also, testified at this hearing for the Louisiana sugar industry. It is hoped that the data presented by both Mr. deGravelles and Dr. Campbell will convince the U.S.D.A. that wages should remain the same.

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DOWN THE ROW

By: Earl J. Hicks

The Louisiana Variety Program

In the first article on the Louisiana Variety Program we looked at the seedling greenhouse work. We saw how the true seed was produced and how Agronomists, Pathologists, and Physiologists work together in making recommendations to the sugar cane breeders. Now we will examine the next phase of our variety program.

The Seedling Nurseries

Preparations to establish the seedling nurseries begin in mid January. Scientists have about 300,000 seedlings in the greenhouses. After the seedlings have made about 4 to 6 inches of growth in pots the Mosaic inoculations begin. By mid April about 75% of the 300,000 seedlings show Mosaic symptoms and are eliminated. The 60,000 to 75,000 seedlings that remain healthy are transplanted to the field. It should be remembered that each seedling is a different sugar cane variety.

Scientist take records and make observations but no **final** evaluation is made on individual seedlings. Instead the seedlings are studied as families and scientists get valuable information on how varieties react when crossed. No selections are made in the plant cane nursery. The plant cane nurseries are cut and selection is made the next year in the stubble crop. Reasons for not selecting in plant cane include: (1) too short a growing season (usually about 5 months) and (2) the breeders feel that some natural selection against poor stubbling varieties occurs in the stubble crop.

In the stubble nursery the scientist looks at each seedling individually. In the spring selection is based on winter survival, vigor, good agromonic type, and mosaic resistance. During the summer months scientists continue to rate and evaluate. In September selection pressure is increased. Emphasis is placed on stalk number, stalk diameter, vigor or stalk height, absence of pith, diseases, and other defects. When a single stool or variety is selected two stalks are cut and set aside to be brixed with a hand refractometer. Only those canes which meet or exceed the standard are replanted. Interplanted with the seedling nurseries are the standard varietiies, L. 60-25, C.P. 52-68, C P. 48-103, and C.P. 61-37.

Approximately 20% of the seedlings originally planted are brixed and about 50% of the canes brixed are rejected. In the seedling stage then, about 98% of the seedlings are discarded. After the selection in the stubble single stool nurseries the seedlings are usually reduced to about 7,500 varieties. These 7,500 varieties are now ready for the next phase in the testing program—the pre-replicated line trials.

At L.S.U. Dr. Louis Anzalone, Jr. handles the selection and seedling nurseries while Dr. Richard D. Breaux and Mr. Preston H. Dunckelman do the same work at the U.S.D.A. sugar cane field station in Houma, La.

Next time we will look at the pre-replicated line trials.

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Once Johnsongrass forms rhizomes, as shown above, it becomes well established. Left unchecked, it can take over your sugar cane crop. The most effective way to prevent this from happening is to control seedling Johnsongrass with "Sinbar".

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Higher yields of sugar cane result when you control weeds and grasses with "Sinbar". This Louisiana field was treated with "Sinbar" in the fall. Picture taken in March shows the excellent control of winter annual weeds in the row.

cide programs. This reduces your application costs.

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With any chemical, follow labeling instructions and warnings carefully.

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SWEET SORGHUM GROWING IN LOUISIANA

Rouby J. Matherne[1]

The sugarcane harvest season in Louisiana begins about mid-October and ends in December. Raw sugar mills are idle the remainder of the year. There would be economic advantages if mills could operate for a longer period. Harvesting cannot safely be extended beyond December, since the first freezes generally occur in November and the crop would be exposed to considerable freeze damage. Earlier harvesting would be possible with sugarcane varities having high sucrose early in the season. A plant that matures earlier than sugarcane would permit an even longer harvest period. Sweet sorghum might fill this requirement. Experiments carried out at the U.S. Sugarcane Field Station, Houma, La., studied dates of planting, time of harvest, plant spacing, fertilization, and keeping quality.

Experimental Procedure

All experiments were conducted with the Rio variety of sweet sorghum on Commerce silt loam. In 1968 the effects of date of planting and stages of maturity on yield were studied. Plantings were made on March 15, April 15, and May 15 in hills 24 inches apart on rows 42 inches wide. Four replications of 1/124 acre plots in a split plot factorial experiment were used. Harvest dates at three stages were selected: anthesis (early), hard dough (medium), and one month after hard dough (late).

Milling tests similar to those of Arceneaux and Davidson (1)[2] were conducted on August 7 and August 20, 1968. Effects of the removal of different plant parts on extraction and juice quality were measured. Identical treatments and milling procedures were used, and each test included five treatments with three 40-stalk samples from stalks planted May 15. The five treatments were: I. Entire above ground portion of the plant; II. Entire stalks with seed heads removed; III. Stalks with seed heads and leaf blades removed; IV. Stalks with leaf blades and upper one-third of stalks removed; and V. The upper one-third of the stalk removed in treatment IV. Samples were milled four times without maceration water (32 tons pressure on the top roll). Juice from the first milling was weighed and analyzed; the undiluted juice from the second, third, and fourth millings was combined, weighed, and analyzed. Final bagasse was weighed. From these data, six replications of each treatment were combined and analyzed as a completely randomized design.

Inversion studies were carried out in 1968 and 1969. Fifteen stalk samples were cut and stored in the field from zero to 5 days. Samples were milled and analyzed to determine inversion rate.

In 1969 another field experiment of sorghum was planted to determine the effects of plant spacing and fertilizer rates on yield and quality of juice. The 1/124 acre plots with these replications were arranged in a factorial design on rows 42 inches apart.

Discussion of Results

Highest yields of tons of stalks per acre were obtained with April 15 planting when harvested early (80 days) or medium (100 days). The late harvest (120 days) yielded the same regardless of planting date (table 1). The juice from the early harvest was low in sucrose and yields of sugar per ton were low. The sucrose content of stalks harvested at the medium date was acceptable and from those har-

[1] Research Agronomist, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, Houma, La.

[2] The author wishes to acknowledge the help of Mr. Lester Davidson, formerly Research Agronomist, who performed the milling tests.

vested at the late date, good (table 1). Yields of 3500 - 4000 pounds of sugar per acre from stalks of the late harvest were acceptable (table 1).

Table 1.—The effects of date of planting and Stage of harvest on yields of Rio, sweet sorghum, Houma, La. — 1968

Stage of harvest	DATE OF PLANTING		
	Mar. 15	Apr. 15	May 15
	Tons of stalks per acre		
Early (anthesis)	14.80 b*	23.45 a	16.78 b
Medium (hard dough)	17.14 b	24.91 a	13.90 b
Late (month after hard dough)	22.58 a	23.43 a	21.53 a
	Pounds of sugar per ton of stalk		
Early (anthesis)	94.4 c	66.9 c	82.2 b
Medium (hard dough)	141.3 b	143.4 b	160.9 a
Late (month after hard dough)	172.9 a	182.3 a	170.8 a
	Pounds of sugar per acre		
Early (anthesis)	1397 c	1569 b	1379 c
Medium (hard dough)	2422 b	3572 a	2237b
Late (month after hard dough)	4056 a	3983 a	3677 a

* Figures in the same section of the table, followed by the same letter, are not significantly different at the 5% level of probability.

In 1969 yields of tons per acre and sugar per acre did not equal that of 1968, and this was probably due to an unusually dry July. When sweet sorghum was planted on 42-inch rows, closer spacing than four plants every 24 inches along the row did not increase yields (table 2). This agrees with results in Mississippi by Broadhead et al. (2). Yield of stalks increased significantly as the rate of nitrogen increased from 0 to 40 pounds. Increasing the rate of nitrogen beyond 40 pounds did not increase yields, nor did the use of rates of 80-40-40 increase yields. This was also in agreement with the work of Broadhead et al. (3).

Table 2.—Effects of plant spacing and amounts of fertilizer on yields of Rio, sweet sorghum Houma, La., 1969

Amount of fertilizer	Yields of tons of stalks per acre		
	Four plants in hills spaced -		
	12" apart	18" apart	24" apart
Ck	9.49 a*	6.84 a	11.56 a
40-0-0	12.80 b	15.39 b	14.61 b
60-0-0	18.08 b	16.43 b	17.11 b
80-0-0	17.31 b	14.36 b	18.77 b
80-40-40	15.97 b	17.16 b	16.74 b

* Figures followed by the same letter are not significantly different at the 5% level of probability.

The different amounts of trash removal (Treatments I, II, and III [table 3]) had important effects on extraction and on juice quality (1). The removal of only the seed heads (Treatment II) did not affect the quality of crusher or normal juice, but did increase normal juice extraction. A marked improvement in millability resulted from removal of both seed heads and leaf blades (Treatment III). This resulted in a greater yield of sugar per ton of sorghum milled. Removal of the upper one-third of stalk and leaves (Treatment IV) did not affect extraction or Brix; but it did significantly increase sucrose and purity of the normal juice, resulting in an increase in recoverable sugar per ton of sorghum milled. However, this portion of the stalk contains juice of too high a quality to be discarded (Treatment V). This test showed that removal of the leaf blades improved the quality of the juice. Efforts to burn the leaves after cutting were unsuccessful.

Inversion of sucrose after harvest could be a serious problem when the crop is grown for sugar. In the 1968 tests the purity dropped 2.65 percentage points during the first 7 hours of storage, and 7.92 percentage points for the 4-day period (table 4). This test was carried out with mature sorghum (120 days). Immature sorghum in the 1969 test showed a much greater drop in purity, 14.70 percentage points after one day (table 5). More mature sorghum in 1969 showed a drop of 6.16 percentage points after

TABLE 3—Effect of the removal of various plant parts of sweet sorghum stalks on millability, extraction, juice quality, and recovery of sugar, Houma, La. 1968

		Part of stalk milled					
			Entire stalk—less—				
		Entire stalk	Seed heads	Seed heads and leaf blades	Leaf blades and upper 1/3 of stalk	Upper 1/3 of stalk removed from Treatment No. IV	L.S.D. (.05)
Treatment No.:		I	II	III	IV	V	
Crusher Juice:							
Extraction	(precent)	44.32	46.39	50.38	51.43	50.58	3.67
Brix	(degrees)	16.36	16.37	18.08	18.66	18.10	.72
Sucrose	(percent)	11.72	11.68	13.79	14.46	13.46	.67
Purity	(percent)	71.64	71.35	76.27	77.49	74.36	1.48
Juice from last 3 mills:							
Extraction	(percent)	13.16	16.12	17.20	15.87	19.30	3.21
Brix	(degrees)	16.81	16.34	18.42	19.47	17.07	.89
Sucrose	(percent)	9.89	10.19	13.45	14.66	11.78	.71
Purity	(percent)	58.83	62.36	73.02	75.30	69.01	2.19
Normal Juice:							
Extraction	(percent)	57.48	62.51	67.58	67.30	69.88	2.47
Brix	(degrees)	16.46	16.36	18.17	18.85	17.82	.74
Sucrose	(percent)	11.30	11.30	13.70	14.51	13.00	.68
Purity	(percent)	68.65	69.07	75.40	76.98	72.95	1.57
96° sugar per ton	(lbs.)	110.55	120.81	167.81	179.03	161.25	9.91
Reduction factors:							
Brix		1.006	.999	1.005	1.010	.985	.006
Sucrose		.964	.967	.993	1.003	.966	.007
Bagasse percent sorghum		37.48	34.87	32.16	31.49	36.11	2.02

one day. It was evident that immature sorghum inverted much more rapidly than mature sorghum, and the mature sorghum should be milled as rapidly as possible.

Summary

Moderate tonnages, 20-23 tons per acre, may be expected from sweet sorghum grown in Louisiana. The crop can be grown in about 120-130 days. Staggered planting would permit harvesting from mid-July to the beginning of October. Maximum yields are obtained when the crop is planted after April 15 and harvested when the seed has reached the hard dough stage. Once the seeds have reached the hard

TABLE 4.—Changes in quality of juice of Rio Sweet Sorghum after several days of storage in the field, Houma, La., 1968

Days of storage after harvest September 16	Crusher Juice Analysis		
	Brix	Sucrose	Purity
	degrees	percent	degrees
0.0	17.93	13.86	77.30
0.3	16.57	12.37	74.65
1.0	16.12	12.02	74.57
2.0	18.97	14.20	74.86
3.0	19.90	14.51	72.91
4.0	20.64	14.32	69.38
L.S.D. (.05)	N.D.	.65	1.55

TABLE 5.—Changes in quality of juice of immature and mature Rio Sweet Sorghum after several days storage in the field, Houma, La. 1969

Maturity and date of harvest	Days of storage	Crusher Juice Analysis		
		Brix	Sucrose	Purity
		degrees	percent	percent
Immature				
September 6	0	17.77	12.98	73.04
	1	18.10	10.56	58.34
	2	19.12	11.19	58.52
Mature				
October 9	0	17.85	13.51	75.69
	1	22.02	15.31	69.53
	2	22.41	15.37	68.59

dough stage, stalks can still be harvested for about one month without an appreciable loss in sugar. Inversion of sucrose occurs quite rapidly after the stalks are harvested; therefore they should be milled within 24 hours. Inversion rates are greatest with immature stalks. The quality of the juice extracted from sweet sorghum stalks can be improved by removal of the seed heads and leaves. Spacing of stalks along 42-inch wide rows, and rates of nitrogen fertilization, influence yields.

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QUOTA INCREASE

The United States Department of Agriculture announced an increase of 100,000 short tons, raw value, in the determination of the domestic sugar requirements bringing that total to 11.2 million tons for this calendar year. The USDA also declared an additional deficit of 150,000 tons in the Puerto Rican sugar quota.

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Vol. 48—No. 20 **July 15, 1970**

The Sugar Bulletin

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN WASHINGTON

By: Horace Godfrey

In continuing our biographical sketches of members of the Louisiana Delegation, our seventh biography will be on Congressman Speedy O. Long, our eighth biography on Congressman Edwiin W. Edwards and our ninth sketch on Congressman John R. Rarick.

SPEEDY O. LONG

SPEEDY O. LONG, Democrat, of Jena, La.,; attorney at law; born in Tullos, La Salle Parish, La., June 16, 1928; served in U. S. Regular Navy for 22 months and graduated from Northeast Junior College, 1950; B. A. degree from Northwestern State College, 1951; received LL.B. degree from LSU Law School in February, 1959; served eight years in the Louisiana State Senate from May, 1956 to May 1964. He is a member and former president of the 28th Judicial District Bar Association of Louisiana; member of American Legion; 32d degree Mason and Shriner; member of First Baptist Church of Jene, La. He married Florence Marie Theriot of Golden Meadow, Louisiana and has two children, Felix Paul and David Theriot. Elected to the 89th Congress November 3, 1964 and reelected to the 90th and 91st Congresses. He is a member of the two committees: Armed Services and Merchant Marines and Fisheries.

EDWIN W. EDWARDS

EDWIN W. EDWARDS, Democrat, of Crowley, La. was born August 7, 1927 in Marksville, Louisiana; entered Naval Air Corps as volunteer at age 17 and graduated from LSU with LL.B. degree in January, 1949. He married Elaine Schwartzenburg in 1949 and has four children: Anna Laure, Victoria Elaine, Stephen Randolph and David Edwin. He practiced law in Crowley, since 1949 and is the senior partner of the law firm of Edwards and Edwards. Was elected to Crowley City Council in 1954 and reelected in 1958; elected to Louisiana State Senate, 35th Senatorial District, in 1964; Catholic; past president and member of Crowley Lions Club; past adjutant and member of American Legion, Acadia Post 15; major in Civil Air Patrol. Was elected to the 89th Congress in a special election in October, 1965 and reelected to the 90th and 91st Congresses; elected Louisiana - Mississippi Delegations' Whip (Zone 11), January 1967. He is a member of Internal Security and Judiciary Committees.

JOHN R. RARICK

JOHN R. RARICK, Democrat, of Baton Rouge; born in Goshen, Ind., Jan. 29, 1924; attended LSU and Tulane, graduated from the Tulane Law School. Judge Rarick resigned as district judge, 20th Judicial District, to declare his candidacy for the 6th District. He served in the U. S. Army for 3 years in World War II; received two Battle Stars; Bronze Star, Purple Heart and was decorated by the Belgian Government; captured in the Battle of the Bulge, spent 4 months in a Nazi prison camp from which he escaped and after 13 days made his way back to the American lines. 32d Degree Mason; Order of the Eastern Star; Shriner; member, Disabled American Veterans; American Legion; and Veterans of Foreign Wars. He married Marguerite Pierce of New Orleans and has three children. Was elected to the 90th Congress November 8, 1966 and reelected to the 91st Congress. He is a member of the Committee on Agriculture.

1970 SUGAR VARIETY RECOMMENDATION FOR LOUISIANA

Prepared jointly by personnel of the Louisiana State University Agricultural Experiment Station, Baton Rouge, Louisiana and the United States Department of Agriculture Sugarcane Field Station, Houma, Louisiana and in cooperation with the LSU Cooperative Extension Service.

The following recommendations are based primarily on results from the outfield test plots under the supervision of the State and U.S.D.A. Experiment Stations. For the 1970 planting season, C.P. 52-68, L. 60-25, C.P. 48-103, C.P. 61-37 and L. 62-96 are the varieties[1] recommended.

C.P. 52-68 is the major variety being grown in Louisiana at the present time. It is susceptible to mosaic and spread of the disease into the variety has been rapid in most areas. Seed cane should be rogued for the control of mosaic if possible. Highly infected seed cane should not be planted.

L. 60-25 has consistently outyielded C.P. 52-68 in sugar per acre. L. 60-25 is a high-sucrose and an earlier maturing variety than C.P. 48-103. It has yielded well on both light and heavy soils. L. 60-25 is susceptible to mosaic and is more severely affected than C.P. 52-68. Roguing for the control of mosaic is essential.

C.P. 48-103 is an early maturing variety. Many growers have been more successful in obtaining higher yields than when the variety was first released. It is moderately resistant to mosaic but seed should be rogued.

C.P. 61-37 has consistently outyielded C.P. 52-68 in tons of cane per acre on both light and heavy soils. It has produced approximately the same as the standard variety in sugar per ton of cane and should fit in well as a middle-to-late season variety. This variety displayed a good degree of mill cane cold tolerance. C.P. 61-37 exhibited mosaic resistance equal to C.P. 48-103, but should be rogued for the control of mosaic disease.

L. 62-96 was released for commercial planting in 1969 and is an early maturing and high sucrose variety. It has consistently outyielded C.P. 52-68 in sugar per ton of cane and sugar per acre. It is rated moderately susceptible to mosaic and should be planted as far as possible from heavily infected fields.

All of the varieties recommended are also susceptible to Ratoon Stunting Disease (R.S.D.) with the exception of C.P. 52-68. Even though the incidence of mosaic in some cases may make roguing for mosaic impractical, it is still important to heat treat these varieties. The control of both mosaic and R.S.D. is very important in maintaining the productivity of these commercial varieties.

The varieties C.P. 55-30, C.P. 44-101, C.P. 47-193 and C.P. 63-13 are presently not being tested because the varieties that are now being recommended have consistently outyielded them. However, these varieties can be grown commercially in some areas for very specific reasons.

N. Co. 310 is a widely grown variety in the Southwestern area. It is primarily responsible for a mosaic epidemic which endangers the use of new varieties which are not as tolerant. N. Co. 310 should not be grown in the future any longer than is necessary.

Planting Recommendaations by areas for 1970 are as follows:

1. Avoyelles, Rapides, and St. Landry parishes:
   a. Light soils: L. 60-25, C.P. 48-103 and L. 62-96 for early harvesting; C.P. 61-37 and C.P. 52-68.
   b. Heavier soil types: L. 60-25, C.P. 61-37, and 52-68.
2. West Baton Rouge, Iberville, As-

(Continued on page 258)

[1]The varieties are listed in the order of acreage they occupy according to the latest variety census.

CANE TALK

By: Howard Robichaux

Winds Damage Cane in Teche Area

On Saturday, July Fourth, gusts of wind up to fifty miles an hour damaged cane in the Teche area. On one farm in particular, Sterling Sugars near Franklin, there was severe cane breakage on about twenty-five acres of land. A twenty acre stretch of C.P. 61-37 had breakage as high as twenty-five per cent. A five acre stretch of L. 62-96 had up to thirty per cent breakage. At Alan Simoneaux's farm near Centerville about seven acres of C.P. 61-37 had about two per cent breakage. Roland Diaz at Oaklawn reported wind damage of L. 60-25. The majority of this cane broke below the first formed joint.

Heat Treating Cane

Cane planting time will be here very soon and growers will be urged to continue heat treating for stunting disease. One cannot expect the most out of varieties C.P. 48-103, C.P. 61-37, and L. 62-96 because they are susceptible to and are affected by stunting disease. If a grower does not have an ample amount of a particular variety, he is advised to increase the variety and treat it the following year. Fifteen tons would give a good start. Growers who do not own a heat treating unit should make arrangements with growers who have heat treating units to either buy seed or to rent their units.

Soil Sampling Crew In St. Mary Parish

Soil sampling is a time consuming task. It is also very necessary and important to the farmer. For this reason, Minus Granger, County Agent of St. Mary Parish, selected and trained two boys from Franklin High School to take soil samples in this area. Farmers who have not had their soil tested within the last five years should ask county agents for proper advice on this subject.

Wheat in The Cane Belt

Some farmers throughout the cane belt have planted wheat. Here are just a few of the farms where I have seen wheat planted: Southdown Inc. at Greenwood; Dennis Thibodaux and Sons in Assumption Parish; Jim Terry at Shadyside Plantation in St. Mary Parish; and Louis Arceneaux at Smithfield in West Baton Rouge Parish. On the whole, wheat yields were fair and prices were low. Average yields varied from farm to farm, ranging from twenty-six to thirty-two bushels per acre. Price per bushel ranged from $1.21 to $1.35 per bushel. All of the above farmers did realize before they planted wheat that net profits per acre would be far lower than sugar cane. But they felt that growing wheat, even though at small profit, was more advantageous than leaving the land idle. Wheat acts as an excellent cover crop and prevents erosion where planted. Where there are thick stands of wheat, all weed growth is suppressed. Johnson grass seedlings and rizomes are also suppressed. This wheat growth enables farmers to eliminate two or three fallow plowings.

Whether wheat will become a problem in the cane field is a question that only time can answer. Wheat growers intend to continue planting this crop and also to increase their acreage. It must be mentioned that Louis Arceneaux at Smithfield has grown wheat for four years and has had no serious problems with wheat in the cane field.

I am not recommending that farmers plant wheat but only reporting on what I have seen happening with wheat in South Louisiana.

SOME VARIETAL CHARACTERISTICS OF THE MORE IMPORTANT COMMERCIAL VARIETIES[1]

C.P. 52-68: This variety is the most widely grown in Louisiana. It is used as the basis for comparison of other varieties in the selection program. Because of the high incidence of mosaic in C.P. 52-68 yields have declined considerably in recent years; therefore, plantings should be reduced.

Advantages

1. Good yielder
2. Medium early in maturity
3. Good on both light and heavy soils
4. Resistant to red rot
5. Very erect
6. Fair milling qualities
7. Fair inversion rating
8. Very good stubbling ability

Disadvantages

1. Susceptible to mosaic
2. Average susceptibility to borer
3. Moderately tolerant to Dalapon

L. 60-25: Now considered one of our important varieties. L. 60-25 is a high sucrose and an earlier maturing variety than C.P. 48-103. It has yielded well on both light and heavy soils.

Advantages

1. Early maturity
2. High sucrose
3. Good vigor

Disadvantages

1. Susceptible to mosaic
2. Susceptible to borers
3. Susceptible to Dalapon
4. Subject to lodging and brittle

C.P. 48-103: It is an early maturing high sucrose variety. It should be planted on the better light soils where weeds and grass are not a problem. More growers should take advantage of this variety's high sucrose and mosaic resistance. In recent years, because of R.S.D. control and other improved management practices, many growers have been more successful in obtaining higher yields than when the variety was first released.

Advantages

1. Early maturity
2. High sucrose
3. Moderately resistant to mosaic
4. Moderately resistant to red rot
5. Good milling qualities
6. Satisfactory inversion rating
7. Relatively cold tolerant

Disadvantages

1. Lacks vigor
2. Susceptible to borer injury
3. Susceptible to Dalapon injury
4. Susceptible to Sinbar injury

C.P. 61-37: It is a high tonnage cane and has yielded well on both light and heavy soils in sugar per acre. This variety has exhibited mosaic resistance equal to C.P. 48-103. Care should be exercised in not covering seed cane too heavily in light soil.

Advantages

1. High tonnage
2. Good cold tolerance
3. Moderately resistant to mosaic

Disadvantages

1. Medium to late maturity
2. Brittle when lodged

L. 62-96: This variety has consistently outyielded C.P. 52-68 in sugar per acre. It is erect and well adapted to machine harvest. It is a high sucrose variety, with good extraction and low fiber.

Advantages

1. High sucrose
2. Early maturing
3. Erect

Disadvantages

1. Susceptible to RSD
2. Moderate susceptibility to mosaic
3. Low stalk population in plant cane

[1]Prepared by Denver T. Loupe, Specialist, LSU Cooperative Extension Service, Research Scientists of the LSU Agricultural Experiment Station, Baton Rouge, La. and the USDA Sugarcane Field Station, Houma, La., June, 1970.

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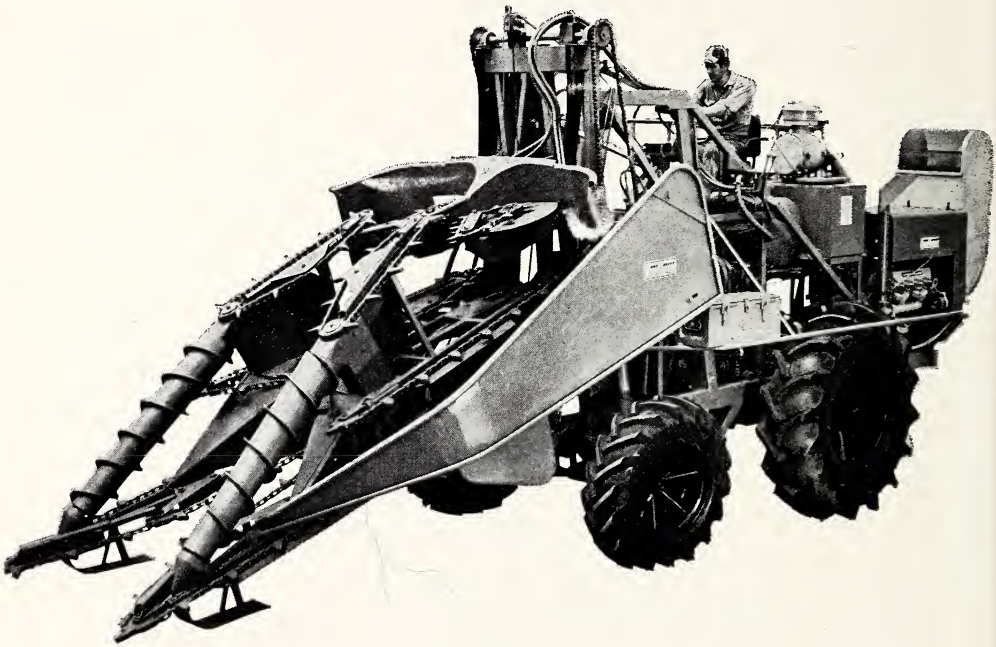

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STRAINS OF SUGARCANE MOSAIC VIRUS IN SUGARCANE VARIETIES: THE EFFECTS ON STANDS AND YIELDS

R. L. Tippett and H. Koike[1]

Sugarcane mosaic virus strains A, B, D, and H were the only strains identified in Louisiana fields since 1950 (1), until a new strain designated strain I, was reported by Tippett and Abbott in 1968 (6). In greenhouse inoculations, Breaux and Dunckelman (2) showed that sugarcane varieties differed in their susceptibility to infection with strains B, H, and I. Field observations of stunting together with severe symptoms on all collections identified as strain I, suggested that this strain might cause greater injury than strain H to some sugarcane varieties.

The objective of the field test reported here was to compare the separate effects of strains A, H, and I on the yields of three commercial varieties. The test was located at the U.S. Sugarcane Field Station, Houma.

The procedures of the test were described in detail elsewhere (7). The test was of a simple factorial design, and the four treatments (healthy or 100% infected with mosaic strains A, H, or I) for each variety were replicated four times. Each plot consisted of three 15 ft. long rows (1/173 acre).

Standard plantation practices for planting (two stalks and a 10% lap), fertilization, cultivation, and weed control were followed.

The test was planted on September 24, 1968 and harvested by hand on November 26, 1969. Yields in tons of cane per acre and pounds of sugar were determined at harvest.

The observations on percentages of mosaic-diseased shoots in April, June, and October, 1969, for all varieties and treatments are presented in Table 1. The healthy controls for C.P. 48-103, and C.P. 61-37 remained free of mosaic symptoms throughout the test duration; only 2% of the shoots of L. 60-25 control exhibited mosaic symptoms in mid-June and in the latter part of October. This indicates that there was little natural spread of mosaic within the test.

The percentages of diseased shoots in April for all three varieties initially infected with strain H or I were very high (95-100%), but markedly lower (13-59%) for all three varieties in the case of strain A. The percentage infection remained high and unchanged throughout the test period in C.P. 61-37 with strain H, and L. 60-25 with strains H or I. There was an appreci-

Table 1. Percent mosaic recorded in April, June, and October, 1969.

Treatments	Percent mosaic in 3 varieties on 3 different dates								
	C.P. 48-103			C.P. 61-37			L. 60-25		
	4-25-69	6-12-69	10-25-69	4-25-69	6-12-69	10-25-69	4-25-69	6-12-69	10-25-69
Healthy	0[1]	0	0	0	0	0	0	2	2
Strain A	59	31	1	13	8	1	40	40	59
Strain H	99	68	87	100	100	100	99	100	100
Strain I	95	47	60	99	84	71	100	100	100

[1]Figures are means of 4 replicates.

[1]Agricultural Research Technician, and Research Plant Pathologist respectively, U.S. Sugarcane Field Station, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana 70360.

[2]Benda, G.T.A. Unpublished data.

able decrease in the percentage of diseased shoots during the test period in C.P. 48-103 with strains A, H, or I; the greatest with strain A, and the least with strain H. There were also marked decreases in percentage of diseased shoots in C.P. 61-37 with strains A or I.

Strain A is of minor importance both in incidence and consequence in commercial fields. The tendancy of some varieties (e.g. C.P. 48-103 and C.P. 61-37) to recover from strain A was observed by Benda[2] in greenhouse studies of mosaic recovery. Benda also observed C.P. 61-37 to recover from strain H, but to a lesser degree than from strain A. He observed no recovery of C.P. 48-103 from strains H and I. Under field conditions, some factors (e.g. cool night temperature) may influence recovery of some varieties from some mosaic strains, which may not occur in the greenhouse. It is also possible that recovery may take place in some varieties in the greenhouse and not in the field due to other factors (e.g. high greenhouse temperatures).

Recovery of sugarcane from strains of mosaic is determined both by the strain of the virus and the variety of cane (4). Recovery may be accompanied by loss of the virus (3, 4). Thus even though 100% diseased cane is planted, if the recovery is high, the measurements may be made on essentially healthy cane. For this reason, it is important to evaluate how many of the stalks at the end of the season still show signs of infection. There is the possibility of underestimating the number of stalks with symptoms due to the height of cane or the mildness of the symptoms.

Data on the effects of strains A, H, and I on stands in the Spring (primary shoot counts) and numbers of millable stalks in the Fall of the three varieties are presented in Table 2. The stand of the variety L. 60-25 infected with strains H or I was significantly lower than for the healthy control. The stands of C.P. 48-103 and C.P. 61-37 were not affected significantly by the strains.

The numbers of millable stalks from cane infected with strain I were significantly lower for all varieties than from healthy cane or from cane infected with strains A or H. In two varieties, C.P. 61-37 and L. 60-25, the numbers of millable stalks from cane infected with strain H were significantly lower than from healthy cane. Infection with strain A did not affect the numbers of millable stalks for all varieties when compared to the healthy controls.

Data on the effects of the mosaic strains on yields of the varieties are presented in Table 3. Strain A did not cause a significant reduction in tons of cane or pounds of sugar per acre in any variety. Strains H and I caused

Table 2. Effects of sugarcane mosaic strains A, H, and I on stand (primary shoot counts in Spring) and millable stalks of 3 sugarcane varieties.

Treatments	No. of primary shoots/acre[1] Varieties			No. of millable stalks/acre[1] Varieties		
	C.P. 48-103	C.P. 61-37	L. 60-25	C.P. 48-103	C.P. 61-37	L. 60-25
Healthy	6,093[2] a	5,834 a	5,704 a	24,849 a	25,756 a	27,528 a
Strain A	6,353 a	4,754 a	4,927 ab	24,633 a	23,293 ab	24,978 a
Strain H	5,229 a	4,883 a	3,414 bc	21,651 a	19,144 b	17,286 b
Strain I	5,229 a	4,797 a	3,111 c	13,483 b	13,742 c	11,668 c

[1]Treatment means under any one variety followed by the same letter are not significantly different at the 5% level of probability according to the Duncan Range Test.

Primary shoot and millable stalk counts were made on April 25 and October 25, 1969, respectively.

[2]Figures are means of 4 replicates.

Table 3. Effects of sugarcane mosaic strains A, H, and I on yields of 3 sugarcane varieties.

Treatments	Tons of cane/acre[1] Varieties			Pounds of sugar/acre[1] Varieties		
	C.P. 48-103	C.P. 61-37	L. 60-25	C.P. 48-103	C.P. 61-37	L. 60-25
Healthy	25.4[2] a	24.2 a	27.2 a	6,883 a	6,082 a	7,145 a
Strain A	26.1 a	25.0 a	23.2 a	6,902 a	6,316 a	6,113 a
Strain H	19.8 b	16.4 b	14.1 b	5,327 b	4,399 b	3,631 b
Strain I	10.1 c	11.2 c	8.0 c	2,782 c	2,896 c	2,937 b

[1]Treatment means under any one variety followed by the same letter are not significantly different at the 5% level of probability according to the Duncan Range Test.
[2]Figures are means or 4 replicates.

significant reductions in tons of cane per acre and pounds of sugar per acre for all three varieties, but strain I caused a significantly greater reduction than strain H in tons of cane per acre for all three varieties and in pounds of sugar per acre for C.P. 48-103 and C.P. 61-37.

Strain I caused the greatest reductions in yield, followed by strain H, which in turn was significantly more severe than strain A. Yields of cane infected with strain A did not differ significantly from the healthy controls, a result not unexpected since, in field experiments, it has generally not been possible to measure significant differences in yield when the rate of infection has been less than 50% (5); the incidence of infection after recovery from strain A is well within the range where field measurements are not sufficiently precise to detect a difference.

Summary

Strain I, a new strain of sugarcane mosaic virus (SCMV) in Louisiana produced the most severe effects on stands and yields. The effects were more severe than those of strain H, the most prevalent SCMV strain in the State. Strain H was in turn significantly more severe than strain A, which did not differ significantly from the healthy controls.

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1970 Variety Recommendations

(Continued from page 248)

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b. Heavier soil types: L. 60-25, C.P. 61-37, and C.P. 52-68.

3. Assumption, St. James, St. John, St. Charles, Lafourche and Terrebonne Parishes:

a. Light soils: L. 60-25, C.P. 48-103 and L. 62-96 for early harvesting;, C.P. 61-37 and C.P. 52-68.

b. Heavier soil types: L. 60-25, C.P. 61-37, and C.P. 52-68.

4. St. Mary, Iberia and St. Martin Parishes:

a. Light soils: L. 60-25 and L. 62-96 for early harvesting, C.P. 61-37 and C.P. 52-68.

b. Mixed and heavier soil types: L. 60-25, C.P. 61-37, and C.P. 52-68.

5. Lafayette and Vermilion Parishes:

a. Light soils: L. 60-25 and L. 62-96 for early harvesting; C.P. 61-37 and C.P. 52-68.

b. Mixed and heavier soil types: L. 60-25, C.P. 61-37, and C.P. 52-68.

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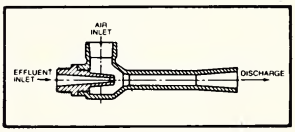

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Vol. 48—No. 21 **August 1, 1970**

The Sugar Bulletin

414 Whitney Bldg., New Orleans, La. 70130
Phone: 525-3956

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN WASHINGTON

By: Horace Godfrey

PATRICK T. CAFFERY

In continuing our biographical sketches of members of the Louisiana Delegation, our final biography will be on Congressman Patrick T. Caffery.

PATRICK T. CAFFERY, Democrat, of New Iberia, Louisiana, was born and reared on a sugarcane farm near Franklin, Louisiana, July 6, 1932, son of R. Earl (who was a sugarcane farmer) and Letitia Decuir Caffery. He attended public schools of Franklin and Hanson Memorial High School; B. A., University of Southwestern Louisiana, 1955; student body president; Blue Key; Juris Doctor, Louisiana State University Law School, 1956; associate and managing editor, Louisiana Law Review, 1955-56; assistant district attorney, 16th Judicial District of Louisiana, 1958-62; New Iberia Jaycee's Distinguished Service Award, 1959; House of Delegates, Louisiana Bar Association, 1962; elected to Louisiana House of Representatives, 1964-68; chairman, Atchafalaya Basin Causeway Commission, 1968; past president, New Iberia Rotary Club and Boy Scout Council and past district commissioner; director, Iberia Crippled Children's Association; attorney; member, Iberia Parish, La., and American Bar Associations; Catholic; married to Anne Bercegeay, January 30, 1954; three sons, Patrick, Jr., Kevin, and Michael; elected to the 91st Congress November 5, 1968. He is a member of the Public Works Committee. Mr. Caffery's district includes a majority of the sugarcane acreage in Louisiana and even though he is not a member of the Agriculture Committee, he has displayed during his first term a keen interest and has been of invaluable assistance on all matters affecting production of sugarcane and marketing of sugar.

FARM LEGISLATION

The U. S. Senate in a surprise action recently reversed its previous position and voted forty to thirty-five to attach an amendment to an Agriculture Appropriations Bill which would have the effect of limiting payments under agricultural programs for cotton, wheat and feed grains beginning in 1971 to $20,000. The House of Representatives had rejected such an amendment and the Appropriations Bill will now go to conference to resolve this and other differences.

Even though sugar benefit payments were not included in this amendment, if such an amendment is permitted to become law, informed members of Congress are fearful that a similar amendment would be offered when sugar legislation is next considered.

Overall farm legislation for feed grains, wheat and cotton is still under consideration in the House. Such legislation, if passed this year, will definitely carry a payment limitation of some kind, according to information available from Capitol Hill.

SUGAR CONSUMPTION

The Secretary of Agriculture's recent action increasing the sugar consumption estimate to 11.6 million tons for 1970 (800,000 tons greater than the original consumption estimate set last November) permits additional marketing for the Mainland Cane and Beet area. The 400,000 ton increase made on July 2, was a surprise to all trade sources.

Fears have been expressed in many quarters that such a large increase may cause reduced prices for the remainder of the year. This should not occur if our foreign suppliers will use restraint in their shipments to the U. S. market.

IN THE FIELD

By: Lloyd L. Lauden

The 1970 Cane Crop

No one, regardless of how often and how much of the Louisiana cane crop he inspects, can predict with any great degree of accuracy what will be the final outcome of any Louisiana cane crop. The writer includes himself in this same category. Nevertheless, the following gives an account of what has already taken place thus far during this crop and makes an attempt of predicting what can happen under certain assumptions.

As the crop began germination in early March there was an apparent weakness in stubble stands, and particularly in stands of second year stubble. L. 60-25 was particularly poor in second stubble and there were some fields of first stubble of several other varieties which were not altogether strong. Plant cane, on the other hand, was generally good with only an occassional fairly weak stand of C.P. 48-103 and L. 60-25, mostly planted in late August of last year.

Fortunately, with the fairly warm days of late April and early May, most of the 1st year stubble cane developed to a fairly good stand and stands materially improved in second year stubble. In fact, second year stubble of L. 60-25 made what might be considered a spectacular comeback after a "death sentence" had been passed on the cane by the writer and others in the industry. This does not mean that second stubble is good this year, but that it developed to the point where it was good enough to keep rather than being plowed out.

In early April the crop looked very grassy but by late May the effects of the chemical weed control program were widened and the crop took on a better appearance. Cool nights, coupled with lack of rainfall during late May and most of June, caused cane to grow slowly. Johnson grass, however, grew when cane was not growing and the crop by July again looked grassy. What is most discouraging is the amount of Johnson grass in plant cane this year. This will do very little harm to plant cane yields in tons of cane per acre this year, but this grass will reduce cane yield in the stubble fields next year.

The large amount of grass in many stubble fields will materially hurt cane yields this year. Most of the sugar belt received some rainfall in late June and at the time of this writing the crop appears to be growing fairly well. Cane height is now about the same as this time last year.

From an overall stand standpoint, considering that plant cane stands are generally good, and knowing that some first year stubble fields are showing some weakness with many more second year fields having weaker stands, it is still possible that this crop can produce more cane per acre than was produced last year. It is the opinion of the writer that if rainfall is adequate through September this crop can produce as much as 26 tons of cane per acre for the State average. This can happen even though stands are not as good this year as stands were last year.

If, on the other hand, a drought similar to that which occured last year happens again this year, is bound to

(Continued on page 270)

DOWN THE ROW

By: Earl J. Hicks

Steps in The Louisiana Variety Program

As you recall the previous article dealt with the seedling nurseries. We saw how the agronomists screened for mosaic, took notes, made observations, evaluations and in the fall eliminated about 98% of the seedlings originally planted. Let us now look at variety testing in line trials.

Pre-replicated Line Trials

About 7,500 potentially new sugar cane varieties are next put into pre-replicated line trials. The pre-replicated line trials are divided into phases known simply as the first line trial and the second line trial. The first line trial consists of plantings in plots six (6) feet long. Also included are the check varieties C.P. 36-105, C.P. 52-68, C.P. 48-103, L. 60-25, and C.P. 61-37. Agronomists brix the varieties being tested, screen for mosaic resistance, erectness, borer resistance, good agronomic type, vigor and the various types of rot which attack sugar cane. As a result of selection pressure in the first line trial about 6,300 potential varieties are eliminated. The remaining 1,200 potential varieties are planted in 15-foot long test plots. Once again agronomists increase the selection pressure and all of the earlier mentioned qualities which make up an outstanding sugar cane variety are again selected. With increased selection pressure, only varieties which display the desired qualities are sent to the next phase of testing—the replicated line trial nurseries.

Replicated Line Trial Nurseries

Approximately 120 new varieties are now assigned either L. or C.P. numbers depending upon their place of origin. The L. means that the varieties were crossed at L.S.U. in Baton Rouge and the C.P. letters stand for Canal Point in Florida where the cross was made by the U.S.D.A. breeders. Pressure is increased again as the agronomists become even more critical in their selection process. Varieties at this stage of testing are put into 16½ foot long plots and are repeated twice. In the Spring of the year shoot counts are made. During the summer months agronomists continue their evaluations of the varieties being tested. In September mature stalk counts are made in each plot in order to estimate cane tonnage for each new variety in the test. Estimated yields and actual yields are closely correlated.

During harvest 15-stalk samples are hand cut, topped, stripped and brought to the mill for weighing and juice analysis. From these data determinations are made for tons of cane, sugar per ton and sugar per acre. Significant differences among the new varieties are shown by statistical analysis. Only if the new varieties equal or exceed the minimum standards will they be advanced to the next stage of testing.

At the Louisiana Experiment Station, Dr. Louis Anzalone handles the pre-replicated line trials and replicated line trials. At Houma, Dr. R. D. Breaux and Mr. P. H. Dunkelman do the same work at the U.S.D.A. sugar cane field station.

Next time we will examine the In-field Variety Program.

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CONTROLLING JOHNSONGRASS SEEDLINGS AND ANNUAL WEEDS IN SUGARCANE IN LOUISIANA DURING THE SUMMER AND FALL, 1970[1]

Herbicides to control weeds, especially Johnsongrass seedlings, are essential for the prevention of weed competition and losses in sugarcane production. Unless Johnsongrass seedlings are controlled in cane planted in summer and early fall, the seed in the soil following a fallow-plow program will germinate and produce mature plants with viable seeds and rhizomes. Johnsongrass will quickly reinfest a field.

Winter weeds are not as noxious as Johnsongrass; nevertheless, they suppress the growth of the cane in the spring and must be removed either chemically or mechanically before regular spring work can proceed. Residual preemergence herbicides such as fenac and terbacil (Sinbar) have been particularly effective for the control of both Johnsongrass seedlings and most winter weeds.

After sugarcane is planted, and after the top of the row is rolled or packed, one of the herbicide programs listed below should be initiated immediately. When ground equipment is used, **herbicidies should be applied on a 30-inch band over the top of the row** (5/12 of the row width). Rates for these herbicides are based on band applications per acre of sugarcane. One lb/A on a 30-inch band basis is equivalent to 2.4 lb/A on a broadcast basis when rows are 72 inches wide.

A. Control of Johnsongrass seedlings and annual weeds in planted cane

1. Fenac[2] Program:
   a. Apply fenac at 1.5 lb/A either as a mixture (4 qts. of "Fenac" or 2 1/2 qts. of "Tri-Fene" mixed with 1 lb/A (1 qt.) of silvex), or 4 qts. of "Fenacplus" applied alone.

      or

      Apply three quarts of Fenac (1.5 lb/gal) or the equivalent of Trifene mixed with 1 quart (1 lb.) of silvez or 3 quarts of Fenacplus per acre for areas that do not have a Johnsongrass seedling problem.
   b. Occasionally, injury has been noted from fenac aplications on heavy textured (clay) soil or poorly drained soils.
   c. Use lower rates in the Bunkie-Meeker area
2. Terbacil (Sinbar) Program:
   a. Apply terbacil (Sinbar) at 2/3 to 3/4 lb/A. Use of the lower rate on silt loam soils where moderate infestations of Johnsongrass are expected; use the higher rate on

(Continued on page 270)

[1]Prepared for distribution by the Louisiana Cooperative Extension Service based on data and information of:

Mr. E. R. Stamper, Louisiana Agricultural Experiment Station, Baton Rouge, Louisiana.

Dr. Rex Millhollon, Crops Research Division, Agricultural Research Service, USDA, Houma, Louisiana.

[2]Three commercial formulations of fenac are available. One formulation is marketed under the trade-mark name of "Fenac" and contains 1 1/2 pounds of fenac per gallon; one formulation is marketed under the trade-mark name of "Tri-Fene" and contains 2 1/2 pounds of fenac per gallon; and one formulation is marketed under the trade-mark name of "Fenacplus" and contains 1 1/2 pounds of dimethylamine salt of fenac per gallon plus 1 pound per gallon of the dimethylamine salt of 2, 4-D.

SECRETARY HARDIN BOOSTS 1971-CROP MAINLAND SUGARCANE ACREAGE BY 15 PERCENT

Secretary of Agriculture Clifford M. Hardin announced a 15 per cent increase in 1971-crop proportionate shares (farm acreage allotments) for sugarcane farms in the Mainland Cane Sugar Area of Florida and Louisiana.

"I am pleased that increased use of sugar in this country has enabled me to take this action. It will contribute significantly to the economic well-being of all who live in the sugarcane area of these two States," Secretary Hardin declared. "Additional farm value of sugarcane resulting from this increased production capability for next year's crop should total almost $25 million."

Shares to be established for farms will total 205,988 acres in Florida and 330,061 acres in Louisiana, as compared to 1970-crop acreages of 179,120 and 287,010 respectively. This will give the area its largest acreage since 1964, the last year of uncontrolled production.

Marketing within such shares is one of the conditions that producers must meet to qualify for payments under the Sugar Act.

Sugar production from the 1969 crop amounted to 1,071,000 tons, about 98,000 tons less than the area's 1969 marketing quota. If the yield of sugar per acre from the 1970 crop were to equal the average for three preceding crops, production would again be less than the area's marketing opportunity. Based on average yields, it is expected that the effective inventory at the beginning of 1971 will be about 70 per cent of that year's marketing quota for the area.

The determination also includes the following provisions:

1. Within each State's allocation, 100 acres and 150 acres, respectively, are set aside for Florida and Louisiana for establishing 1971 new-producer shares of 50 acres each for farms that did not grow sugarcane during the 1968-70 period. An equal amount is also set aside for adjusting shares for old-producer farms, upon appeal to the State committee, to correct any errors made in computing such shares.
2. A farm base will be determined for each old-producer farm at the larger of (a) the 1970 crop acreage (within the final share established) harvested for sugar and seed plus the acreage on bona fide abandonment, or (b) the 1970 crop original share if the farm operator used at least 90 per cent of such share or used less than 90 per cent for reasons beyond his control. This method establishes bases in the same general manner as used in the prior four years and will result in bases not less than last year's share except in cases where the farm operator intentionally underplanted his farm's 1970 share by more than 10 per cent.
3. Individual old-producer farm shares will be established in the following manner:
   (a) Farms having bases of 4.4 acres or less will receive a share of 5 acres.
   (b) For all other farms, a uniform adjustment factor will be applied to the farm

(Continued on page 270)

CONTROLLING JOHNSONGRASS

(Cotinued from page 268)

heavy textured (clay) soils **or** where heavy infectations of Johnsongrass are expected in summer-planted cane.

b. Do not apply on varieties C.P. 48-103 and C.P. 36-13 on sandy soil unless prior experience has shown no injury from "Sinbar"

B. Control of Johnsongrass seedlings and annual weeds in cane cut for seed

Apply terbacil (Sinbar) at approximately 3/4 to 1 lb/A shortly after sugarcane is hervested. Observe all cautions mentioned above for plant cane.

C. General Cultural Practices:

1. After herbicides are applied on the drill, cultivate the middle and sides of row to control weeds.

2. Rogue fields to remove Johnsongrass plants growing from rhizomes that escaped fallow plowing and those seedlings that survive chemical treatments.

3. Do not apply Dowpon on any variety of cane planted in the fall.

Chemicals Referred to in the Recommendations

Common Name	Chemical Name
Fenac	Sodium salt of 2, 3-6-trichlorophenylacetic acid (Fenac or Tri-Fene)
Fenacplus	dimethylamine salt of 2, 3, 6-trichlorophenylacetic acid plus 1 pound of dimethylamine salt of 2, 4-D.
Silvex	low volatile esters of 2-(2, 4, 5-trichlorophenoxy) propionic acid
Terbacil	3-tert-butyl-5-chloro-6-methyluracil (Sinbar)

—o—

IN THE FIELD

(Continued from page 264)

reduce cane per acre below that produced last year. The reason for this, as mentioned before, is that stands this year are not as good as stands were for the 1969 crop.

What sugar yields per acre this crop will produce is extremely difficult for anyone to predict. It is almost impossible for the writer to anticipate what yields of sugar per ton of cane this crop can produce. However, with L. 60-25 in greater acreage this year than last year, this high sugar producing variety should materially help in the sugar per ton State average. Although this is a fact, it is the writers opinion that early September cool nights together with a very dry September are the only two environmental factors that could possibly help in the production of much more than 175 lbs. of sugar per net ton of cane. Therefore, looking at the crop today with an optimistic attitude, this crop might produce 605,000 tons of sugar, (266,000 acres in cane for sugar times 26 tons times 175 lbs. sugar per net ton). This is what the crop looks like at this time. This is an experienced guess. Who can say? The U.S.D.A. Crop Reporting Service estimated on July 10 that we would make 26 tons of cane per acre this year. However, on July 10 of last year the U.S.D.A. estimate was also 26 tons, but we actually made only 24 tons.

—o—

ACREAGE INCREASE

(Continued from page 269)

bases in each State to keep the total shares for all farms within the State acreage allocation.

4. Any unused 1971-crop share acreage within either State may be distributed to old-producer farms within that State which can use additional acreage. Operators of farms will be informed of this provision in the near future in order that they may file reguests for additional acreage at their ASCS county office. The requests must be filed by Jan. 12, 1971 in Louisiana, and June 30, 1971 in Florida. In Louisiana, any unused acreages will first be reallocated within parishes. In Florida, distribution will be Statewide.
5. Requests for new-producer shares must be filed in ASCS county offices by Sept. 1, 1970 in Louisiana and by Aug. 31, 1970 in Florida.

General provisions of the determination are similar to those that have been in effect for prior crops.

As in former years, ASCS county offices have been delegated responsibility for establishing farm proportionate shares in accordance with the terms of the Department's regulation.

The Department held an informal public hearing May 21 to receive views and recommendations with respect to establishing farm proportionate shares for the 1971 mainland sugarcane crop. The spokesman for the American Sugar Cane League recommended the acrtage level established by the determination.

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The Sugar Bulletin

OFFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U. S. A.

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Vol. 48—No. 22 **August 15, 1970**

The Sugar Bulletin

414 Whitney Bldg., New Orleans, La. 70130
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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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RECAPITULATION OF FINAL REPORTS OF LOUISIANA SUGAR CANE FACTORIES, CROPS 1960-1969, A. S. C. S. Reports

Total for State Factories	46	46	46	46	48	47	47	46	46	44
Year	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Crop Days	61.7	77.2	54.5	83.8	74.3	68.1	56.5	70.6	67.2	49.7
Lost time % total time	11.53	12.96	10.32	16.23	18.11	18.25	12.40	13.40	14.07	10.58
Cane: Tons ground, gross weight	6,051,303	7,659,253	5,768,782	9,062,892	7,893,099	7,088,693	6,959,715	8,710,147	8,027,523	6,112,137
Tons ground, net weight	5,582,687	7,118,497	5,315,415	8,554,103	7,383,164	6,542,184	6,562,729	8,110,847	7,376,941	5,676,089
% Total Cane Ground, Gross Weight	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tons Ground per Hour	99.82	103.25	106.89	116.80	115.00	115.30	127.44	128.93	128.65	133.26
Extraction N. J. % Cane	72.93	73.30	72.26	72.86	73.17	71.24	73.22	72.16	71.15	72.48
Sucrose Extraction, %	89.79	90.26	89.53	89.59	89.15	89.02	89.56	89.42	88.84	89.59
Maceration % Cane	18.28	17.70	18.32	16.72	18.22	20.55	18.12	19.73	20.90	20.11
Fiber % Cane	14.21	14.17	14.39	14.07	14.28	14.58	13.99	14.34	14.83	14.19
Java Ratio	76.54	76.54	75.74	76.86	76.71	75.45	77.26	75.99	75.47	76.35
Analysis										
Crusher Juice Brix	16.39	17.05	17.36	17.20	16.15	16.81	16.38	17.32	17.36	17.71
Crusher Juice Sucrose	12.85	13.65	13.78	13.63	12.31	13.14	13.06	13.38	13.88	14.20
Brix Factor (Final Report)	96.95	97.07	96.89	97.03	97.03	97.03	97.07	97.06	97.00	97.11
Sucrose Factor (Final Report)	94.24	94.29	93.83	94.50	94.31	94.29	94.49	94.24	94.24	94.37
Normal Juice Brix	15.89	16.55	16.82	16.69	15.67	16.31	15.90	16.81	16.84	17.14
Normal Juice Sucrose	12.11	12.87	12.93	12.88	11.61	12.39	12.34	13.08	13.08	13.40
Normal Juice Purity	76.20	77.76	76.85	77.17	74.09	75.96	77.63	77.80	77.68	78.20
Factory Syrup, Brix	56.82	57.34	57.86	58.48	56.82	58.37	57.65	58.81	58.58	59.09
Residual Juice Brix	6.11	6.20	6.48	6.61	5.84	5.74	5.76	5.79	5.95	5.81
Bagasse Sucrose	3.15	3.25	3.36	3.47	3.17	3.27	3.33	3.41	3.43	3.45
Bagasse Moisture	50.97	50.29	50.97	50.47	51.11	51.60	51.10	51.51	51.73	51.98
Bagasse Fiber	44.59	45.26	44.29	44.73	44.24	43.81	44.30	43.79	43.54	43.35
Press Cake Sucrose	3.99	4.39	4.52	4.42	3.88	4.15	4.21	4.30	4.14	4.13
Sucrose Balance										
Molasses, Sucrose % Cane	1.005	.968	1.105	1.036	1.064	1.028	0.936	0.970	0.949	1.034
Press Cake, Sucrose % Cane	.182	.192	.202	.184	.190	.208	0.186	0.198	0.210	0.165
Undetermined, Sucrose % Cane	.159	.140	.171	.130	.211	.153	0.172	0.159	0.203	0.111
Bagasse, Sucrose % Cane	1.004	1.017	1.093	1.090	1.025	1.088	1.053	1.117	1.169	1.129
Total Losses, Sucrose % Cane	2.350	2.317	2.571	2.440	2.490	2.477	2.347	2.444	2.531	2.439
Sugar, Sucrose % Cane	7.485	8.131	7.865	8.034	6.953	7.437	7.743	8.111	7.944	8.402
Total, Sucrose % Cane	9.835	10.448	10.436	10.474	9.443	9.914	10.090	10.555	10.475	10.841
Pounds 96° Sugar M&E Ton Gross Cane	155.94	169.39	163.85	167.37	144.85	154.94	161.32	168.97	165.49	175.04
Pounds 96° Sugar M&E Ton Net Cane	169.04	182.26	177.82	177.32	154.86	167.88	171.08	181.46	180.08	188.49
Gals. F.M. (B/S) M. & E. T/C 80° Brix	6.58	6.43	6.88	6.85	7.33	6.79	6.43	6.42	6.53	6.66
Boiling House Efficiency	96.86	97.34	95.71	97.09	96.03	96.48	96.85	97.00	96.44	97.37

LOUISIANA MILL REPORTS

Production of Sugars (tons, 2,000 lbs.), Syrup, 1st Molasses, 2nd Molasses, and Blackstrap—1960-1969

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Raw Sugar (as produced)	390,576	538,346	383,891	672,944	571,803	506,150	516,100	681,050	612,364	492,447
Turbinados	37,217	38,528	31,642	12,573	7,564	233	20	250	none	none
Granulated	31,358	56,314	43,465	56,823	33,933	30,671	31,008	38,583	36,426	28,722
Total Sugars (Raw Value)	469,711	649,514	471,601	759,473	572,710	550,035	562,290	740,234	668,667	537,429
String—Others	145	0	176	46	117	44	4,392	134	64	98
Sirup—Gallons	1,167,418	1,079,468	1,031,828	719,984	784,361	749,785	639,398	832,908	1,067,468	1,096,071
1st Molasses—Gallons	1,701,721	1,853,590	1,824,430	1,902,267	2,048,551	1,809,642	2,030,646	1,921,974	1,923,210	1,618,368
2nd Molasses—Gallons	1,677,052	1,221,572	947,988	783,117	599,632	753,274	446,726	543,631	608,450	503,000
Blackstrap (Actual Gallons)	33,565,060	41,567,300	33,696,710	54,067,578	46,694,472	40,915,699	38,218,191	48,183,340	44,351,232	34,784,737
Blackstrap (80 Brix)	37,671,166	47,263,538	37,917,256	60,302,273	55,997,650	46,339,726	42,938,192	54,632,966	50,626,060	39,550,133

PLANTED ACRES OF SUGARCANE ON LOUISIANA FARMS PARTICIPATING IN THE SUGAR PROGRAM BY PARISHES, FROM A. S. C. S. REPORTS

PARISHES	Acreage Planted for Sugar and Seed within Proportionate Shares											
	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Ascension	9,439.3	10,647.5	11,593.0	12,256.7	13,626.1	12,766.5	13,806.6	13,965.8	13,410.8	13,250.3	12,545.7	10,874.5
Assumption	25,882.7	29,397.6	29,872.8	31,419.4	34,739.7	33,988.9	35,889.2	32,370.2	32,602.5	35,140.4	32,433.9	28,238.9
Avoyelles	1,973.4	2,279.6	2,404.1	2,645.6	3,156.6	2,515.6	2,881.5	2,662.7	2,670.5	2,731.5	2,596.6	2,204.3
East Baton Rouge					.1	0.1	0.3					
Iberia	29,697.4	34,763.3	36,968.3	39,145.8	40,906.8	40,322.8	44,321.2	38,897.9	39,441.3	39,497.9	37,465.5	32,360.8
Iberville	15,621.4	17,741.9	17,520.1	18,669.8	21,886.7	20,423.9	23,443.3	21,913.9	22,174.3	22,249.4	21,234.7	17,992.9
Lafayette	6,654.3	7,826.0	8,279.4	8,573.3	8,730.1	7,978.1	9,316.2	8,274.2	8,397.6	8,406.0	8,025.7	6,849.7
Lafourche	23,632.1	26,665.5	26,457.8	28,948.4	32,165.2	32,744.3	35,322.3	31,568.5	31,469.3	31,136.1	31,399.2	26,445.8
Plaquemines								1,084.0	742.8	692.9		
Pointe Coupee	8,262.4	10,095.0	11,030.9	12,389.7	13,674.6	12,286.0	13,371.5	11,580.6	11,649.3	11,631.5	11,079.9	9,418.0
Rapides	1,238.9	1,412.6	1,664.4	2,202.4	2,503.5	2,125.3	2,600.6	2,307.8	2,345.9	2,385.1	2,267.3	1,911.0
St. Charles	1,243.2	1,524.6	1,502.5	1,557.1	2,015.1	2,315.9	2,811.0	2,813.5	3,029.4	2,711.7	2,577.9	1,691.3
St. James	14,022.5	15,428.4	16,994.0	18,734.7	21,559.9	21,681.9	23,955.1	20,940.1	20,592.8	20,446.7	19,872.3	17,175.3
St. John	12,528.6	9,109.6	9,249.0	9,875.5	10,800.6	10,892.0	11,955.6	9,948.1	9,965.9	10,571.1	10,016.4	8,483.6
St. Landry	34.9	36.6		18.0					23.9	23.8		
St. Martin	15,005.1	16,798.7	18,370.7	19,185.5	19,568.6	19,273.4	21,518.4	18,538.8	18,715.6	18,594.6	17,698.5	15,185.0
St. Mary	29,749.8	34,216.4	35,049.9	35,688.3	40,437.4	40,175.1	42,503.9	38,450.5	38,777.3	39,086.9	37,224.2	31,400.9
Terrebonne	28,656.0	36,157.4	35,730.7	37,659.1	39,874.1	39,900.5	42,051.1	37,920.4	38,435.8	38,450.1	36,427.1	30,672.9
Vermilion	1,805.4	1,968.8	2,082.3	2,554.5	3,031.5	3,098.8	3,565.5	3,136.3	3,146.8	3,548.6	3,414.6	3,040.6
West Baton Rouge	12,571.5	14,098.9	14,110.4	15,195.6	17,237.3	16,291.8	16,035.7	15,103.5	15,246.2	12,942.9	12,364.9	10,456.9
West Feliciana	2,064.6	2,473.2	2,734.3	2,898.6	3,369.4	3,248.1	3,115.0	2,764.0	2,649.4	2,742.9	2,581.6	2,177.9
TOTAL	240,083.5	272,641.9	281,614.6	299,618.0	329,283.3	322,029.0	348,463.8	314,240.8	315,487.4	316,240.4	301,226.0	256,580.3

PROPORTIONATE SHARE ACRES HARVESTED FOR SUGAR—YIELD OF SUGARCANE PER ACRE AND YIELD OF RECOVERABLE SUGAR PER ACRE OF LOUISIANA FARMERS PARTICIPATING IN THE SUGAR PROGRAM, BY PARISHES FROM A. S. C. S. REPORTS

PARISH	Proportionate Shares Harvested for Sugar (Acres)				Yield of Cane Per Acre Actual Net Tons				Yield of Recoverable Sugar per Acre CWT			
	1966	1967	1968	1969	1966	1967	1968	1969	1966	1967	1968	1969
Ascension	11,995.9	12,372.6	11,722.5	9,961.7	23.53	29.22	27.15	24.82	38.99	52.19	51.09	47.63
Assumption	30,126.4	32,991.2	30,794.7	26,041.1	24.20	29.66	28.87	24.93	39.02	54.18	53.78	47.76
Avoyelles	2,552.2	2606.4	2,530.5	2,104.2	28.11	34.17	30.06	27.94	45.16	57.29	53.97	53.18
East Baton Rouge					0				0			
Iberia	35,516.3	36,158.7	34,711.6	28,986.5	23.90	27.88	26.39	23.42	42.26	51.88	49.27	44.02
Iberville	20,391.6	20,953.0	19,933.9	16,555.6	23.08	27.49	25.40	24.44	37.87	49.03	46.16	45.43
Lafayette	7,583.4	7,656.0	7,408.9	6,289.3	20.31	22.04	20.81	20.76	36.94	42.12	42.95	39.87
Lafourche	28,704.8	28,688.3	29,592.3	24,385.2	21.58	27.59	26.22	24.74	36.40	49.36	46.74	46.38
Plaquemines	455.8	610.0			10.64	20.05			15.20	33.42		
Pointe Coupee	10,801.9	10,881.5	10,404.8	8,754.6	22.34	26.57	24.72	25.44	38.04	49.44	45.00	47.78
Rapides	2,218.9	2,259.8	2,186.1	1,818.0	27.53	33.81	22.00	29.35	45.20	57.50	51.52	55.27
St. Charles	2,763.1	2,507.7	2,261.6	1,533.5	20.25	24.42	23.09	21.22	33.79	45.06	43.97	40.71
St. James	18,993.2	19,108.1	18,522.6	15,823.7	23.20	27.51	26.37	23.23	39.96	50.73	47.81	45.33
St. John	8,920.4	9,754.4	9,176.0	7,899.6	21.21	26.98	23.85	26.03	36.95	49.78	42.96	48.83
St. Landry	23.9	23.8			29.32	23.08			47.65	43.63		
St. Martin	17,142.8	17,085.6	16,522.7	13,607.2	21.18	26.00	25.03	22.48	36.51	47.40	46.58	40.73
St. Mary	35,461.9	36,233.3	34,882.8	28,342.2	24.13	29.09	27.52	23.64	42.72	54.00	51.18	45.16
Terrebonne	35,815.7	36,241.9	34,719.5	28,681.5	20.33	25.64	24.21	23.52	33.37	46.85	43.01	44.10
Vermilion	2,883.9	3,282.4	3,192.4	2,821.1	20.42	21.85	23.23	18.99	37.10	41.71	44.33	36.25
West Baton Rouge	13,779.1	12,012.1	11,538.2	9,441.6	23.48	29.51	27.29	25.65	38.96	54.38	52.45	49.72
West Feliciana	2,351.8	2,392.9	2,295.7	2,043.6	24.81	27.89	19.14	21.20	40.75	45.84	35.01	41.88
TOTAL	288,483.0	293,819.7	282,396.8	235,090.2	22.73	27.60	26.06	24.01	38.60	50.53	48.01	45.43

NUMBER OF PRODUCER-PAYEES, NUMBER OF FARMS GROWING SUGAR CANE, AND AVERAGE SUGAR CANE ACREÂGE GROWING PER FARM IN LOUISIANA 1937 - 1969

Crop Year	Number of producer-payees	Number of farms	Average sugar cane acreage growing per farm
1937	16,572	10,260	30.1
1938	16,901	10,468	28.3
1939	17,701	10,918	24.5
1940	15,635	9,332	28.4
1941	14,509	8,599	30.7
1942	14,329	8,671	34.4
1943	13,439	8,052	36.1
1944	12,662	7,556	36.5
1945	10,344	6,304	44.0
1946	10,151	6,141	47.8
1947	9,605	5,689	52.8
1948	10,208	5,957	50.2
1949	9,711	5,559	54.1
1950	9,047	5,028	60.2
1951	8,755	4,833	58.0
1952	8,237	4,463	66.0
1953	7,540	4,010	75.8
1954	7,384	3,883	70.3
1955	7,424	3,861	66.4
1956	7,176	3,703	62.6
1957	6,639	3,343	74.3
1958	5,936	2,908	82.6
1959	5,697	2,686	101.5
1960	5,568	2,547	110.6
1961	5,662	2,534	118.3
1962	5,563	2,413	136.5
1963	5,509	2,308	137.3
1964	5,690	2,301	151.4
1965	5,599	2,218	141.7
1966	5,345	2,080	151.7
1967	5,183	1,912	165.4
1968	5,099	1,794	167.9
1969	4,915	1,687	151.9

UNITED STATES DEPARTMENT OF AGRICULTURE

Louisiana ASCS State Office

GROWERS' INCOME, DOLLARS, NET TON OF SUGARCANE DELIVERED TO LOUISIANA SUGAR MILLS, 1937 - 1969

	Paid by Mills	Conditional Payments, Sugar Acts of 1937 and 1948, as Amended					
Year	Acct. Cane	Mols. Bonus	Acct. Recoverable Sugar	Abandonment Payment	Deficiency Payment	Total Conditional Payment	Support or CCC Payment	Total Amount Rec'd
1937	2.907	—	.892	.023	.016	.913	—	3.838
1938	2.663	—	.948	—	—	.948	—	3.611
1939	2.881	—	.976	—	—	.976	—	3.857
1940	2.717	—	.908	.013	.258	1.179	—	3.896
1941	3.679	.256	.924	.005	.084	1.013	—	4.948
1942	4.033	.319	1.240	.001	.084	1.325	—	5.677
1943	3.936	.323	1.213	.008	.023	1.244	.341	5.844
1944	3.837	.313	1.165	.048	.004	1.217	.826	6.193
1945	3.762	.320	1.158	.008	.002	1.169	1.496	6.747
1946	6.222	.322	1.235	.041	.001	1.277	—	7.821
1947	6.634	.609	1.250	.001	.136	1.387	—	8.630
1948	5.821	.058	1.180	.001	.035	1.216	—	7.095
1949	6.199	—	1.204	.001	.030	1.235	—	7.434
1950	7.146	.738	1.287	—	.003	1.290	—	9.174
1951	5.149	.723	1.046	.039	.120	1.205	—	7.077
1952	6.542	.097	1.175	—	.001	1.176	—	7.815
1953	6.963	.141	1.263	.001	—	1.264	—	8.368
1954	6.582	.133	1.219	—	—	1.219	—	7.934
1955	6.085	.170	1.155	.001	.001	1.157	—	7.412
1956	7.148	.720	1.288	—	—	1.288	—	9.156
1957	6.461	.226	1.197	.005	.015	1.217	—	7.904
1958	7.080	.222	1.263	.001	.012	1.276	—	8.578
1959	6.855	.103	1.227	.001	.048	1.276	—	8.234
1960	6.925	.236	1.204	.003	.012	1.219	—	8.380
1961	7.266	.197	1.280	—	—	1.280	—	8.743
1962	7.520	.400	1.323	.075	.027	1.425	—	9.345
1963	10.312	.411	1.291	.001	0	1.292	0	12.015
1964	6.403	.075	1.180	.001	.002	1.183	0	7.661
1965	7.342	.119	1.249	.003	.022	1.274	0	8.735
1966	7.748	.371	1.244	.001	.002	1.247	0	9.366
1967	8.535	.317	1.283	.000	.000	1.283	0	10.135
1968	8.871	.159	1.295	.007	.001	1.303	0	10.333
1969	9.377	.276	1.358	.001	.002	1.361	0	11.014

PRODUCTION OF SUGAR IN LOUISIANA 1900 - 1968

Crop Year	Production 1,000 short tons	Crop Year	Production 1,000 short tons
1900	309	1936	386
1901	360	1937	401
1902	369	1938	491
1903	256	1939	436
1904	398	1940	234
1905	377	1941	322
1906	258	1942	397
1907	381	1943	432
1908	398	1944	396
1909	327	1945	370
1910	350	1946	331
1911	360	1947	297
1912	157	1948	393
1913	299	1949	414
1914	248	1950	451
1915	140	1951	295
1916	310	1952	451
1917	249	1953	479
1918	286	1954	478
1919	124	1955	454
1920	173	1956	429
1921	331	1957	396
1922	301	1958	443
1923	165	1959	440
1924	90	1960	469
1925	142	1961	650
1926	48	1962	472
1927	72	1963	759
1928	135	1964	573
1929	204	1965	550
1930	188	1966	562
1931	160	1967	740
1932	228	1968	669
1933	209	1969	535
1934	234	Production reported on 96° basis prior	
1935	339	to 1934, raw value basis thereafter	

PRODUCTION OF SUGAR E

Name of Factory	Gross tons of cane ground for sugar	Net tons of cane ground for sugar	Direct Consumpi
Albania	99,768	91,560	—
Alma	123,693	115,518	—
Angola	49,158	43,315	—
Armant	134,515	121,191	—
Audubon	258	245	—
Billeaud	120,955	112,950	—
Breaux Bridge	115,158	105,567	—
Cajun	252,124	232,879	—
Caldwell	160,082	150,704	—
Catherine (S)	74,568	69,867	—
Cedar Grove	75,810	70,370	—
Cinclare	178,585	162,303	—
Columbia (C&G)	82,707	76,951	1,673
Columbia (F)	74,313	70,334	—
Cora-Texas	114,000	104,584	—
Duhe-Bourgeois	114,122	106,443	—
Enterprise	170,585	159,446	—
Evan Hall	270,411	250,736	—
Georgia	111,069	101,359	—
Glenwood	173,637	161,398	—
Greenwood	149,823	138,556	—
Helvetia	143,649	141,654	—
Iberia	190,670	176,848	—
Leighton	236,409	218,537	—
Levert-St. John	139,288	128,379	—
Louisa	117,065	108,068	—
Lula	164,594	152,718	—
Meeker	123,756	112,136	—
Oaklawn	195,649	185,220	—
Poplar Grove	107,825	99,639	—
Raceland	230,031	213,124	—
San Francisco	61,631	57,398	2,417
St. James	225,758	206,001	—
St. Mary	154,221	144,981	—
Smithfield	130,679	119,154	—
Southdown	157,485	148,027	12,608
Sterling	254,228	238,314	—
Supreme	145,508	137,496	12,024
Terrebonne	144,177	135,619	—
Valentine	150,909	143,989	—
Vida	57,818	54,044	—
Westfield	180,494	168,024	—
Wilbert's Myrtle Grove	115,065	102,835	—
Youngsville	39,887	37,608	—
TOTAL	6,112,137	5,676,089	28,72

[1]Based on partly estimated weights and polarization as reported on Forms SU-123.

[2]Excludes 44 tons estimated in process.

[3]Granulated (plantation).

[4]Refined.

[5]Excludes 54 tons estimated in process.

[7]Excludes 10,674 gallons estimated in process.

[8]Exclules 18,850 gallons estimated in process.

[9]Excludes 61,305 gallons estimated in process.

YPES, LOUISIANA 1969 CROP[1]

Tons of Sugar Produced			Blackstrap Molasses	
	Total		Gallons	
Raw	As Produced	Raw Value	Produced	Produced 80 Brix
8,623	8,623	9,003	624,643	710,183
10,031	10,031	10,279[2]	734,794	745,730[7]
3,500	3,500	3,578	256,608	313,087
11,354	11,354	11,659	772,114	874,883
19	19	19	4,899	5,651
10,201	10,201	10,537	761,502	847,695
9,167	9,167	9,305	646,383	768,689
20,543	20,543	21,512	1,345,000	1,507,333
14,643	14,643	14,954	893,670	988,176
4,950	4,950	5,002		
5,733	5,733	5,886	476,464	495,210
15,376	15,376	15,737	962,567	1,075,197
3,996	5,669	5,878[5]	282,868	342,958[8]
6,732	6,732	6,908	449,279	516,230
9,057	9,057	9,334	778,033	844,122
10,200	10,200	10,536	629,420	712,844
14,727	14,727	15,036	1,029,518	1,129,321
22,904	22,904	23,284	1,630,860	1,863,838
9,798	9,798	9,798	572,243	668,700
16,080	16,080	16,433	1,193,933	1,269,015
12,980	12,980	13,443	842,224	959,097
12,241	12,241	12,456	804,980	966,709
17,449	17,449	17,791	871,530	1,076,243
20,569	20,569	21,174	1,389,055	1,706,600
10,600	10,600	10,861	834,898	951,028
9,531	9,531	9,747	689,026	796,798
15,202	15,202	15,619	1,102,891	1,247,669
10,632	10,632	10,982	631,645	747,741
17,234	17,234	17,548	1,233,777	1,376,655
8,962	8,962	9,187	609,352	709,638
20,411	20,411	21,314	1,445,919	1,519,919
	2,417	2,560		
19,732	19,732	20,831	1,367,118	1,553,414
13,667	13,667	14,275	783,010	960,132
11,235	11,235	11,406	750,565	809,515
	12,608	13,469	764,934	943,683[9]
24,031	24,031	24,954	1,577,346	1,864,578
218	12,242	13,090	1,026,111	1,072,461
12,475	12,475	12,936	739,594	914,324
13,171	13,171	13,851	844,541	1,022,781
4,786	4,786	4,873	303,900	331,615
16,751	16,751	17,259	1,197,167	1,336,655
9,623	9,623	9,677	694,830	731,755
3,313	3,313	3,448	244,526	272,261
492,447	521,169	537,429	34,784,737	39,550,133

QUOTATIONS ISSUED BY THE LOUISIANA SUGAR EXCHANGE, INC.
ON RAW SUGAR AND BLACKSTRAP MOLASSES
1969-70 PRICING PERIOD

Date		N.Y.	N.O.	B'strap.
Oct.	10	9.88	7.86	13.50
Oct.	11	No market		
Oct.	12	Sunday		
Oct.	13	No market		
Oct.	14	7.88	7.86	13.50
Oct.	15	7.88	7.86	13.50
Oct.	16	7.88	7.86	13.50
Weekly Ave.		Raws 7.8600	B'strap	13.5000
Oct.	17	7.88	7.86	13.50
Oct.	18	No market		
Oct.	19	Sunday		
Oct.	20	7.90	7.88*	13.50
Oct.	21	7.90	7.88	13.50
Oct.	22	7.90	7.88	13.50
Oct.	23	7.90	7.88	13.50
Weekly Avg.		Raws 7,8760	B'strap.	13.5000
Oct.	24	7.90	7.88	13.50
Oct.	25	No market		
Oct.	26	Sunday		
Oct.	27	7.90	7.86*	13.50
Oct.	28	7.90	7.88	13.50
Oct.	29	7.90	7.88	13.50
Oct.	30	7.88	7.86	13.50
Weekly Avg.		Raws 7.8720	B'strap.	13.5000
Oct.	31	7.88	7.86	13.50
Nov.	1	No market		
Nov.	2	Sunday		
Nov.	3	7.88	7.86	14.00
Nov.	4	No market		
Nov.	5	7.88	7.86	14.00
Nov.	6	7.88	7.86	14.00
Weekly Avg.		Raws 7.8600	B'strap.	13.8750
Nov.	7	7.88	7.86	14.00
Nov.	8	No market		
Nov.	9	Sunday		
Nov.	10	7.85	7.83	14.00
Nov.	11	No market		
Nov.	12	7.85	7.83	14.00
Nov.	13	7.85	7.83	14.00
Weekly Avg.		Raws 7.8375	B'strap.	14.0000
Nov.	14	7.75	7.73	14.00
Nov.	15	No market		
Nov.	16	Sunday		
Nov.	17	7.75	7.73	14.00
Nov.	18	7.75	7.73	14.00
Nov.	19	7.75	7.73	14.00
Nov.	20	7.75	7.73	14.00
Weekly Avg.		Raws 7.7300	B'strap.	14.0000
Nov.	21	7.75	7.73	14.00
Nov.	22	No market		
Nov.	23	Sunday		
Nov.	24	7.75	7.73	14.00
Nov.	25	7.95	7.93	14.00
Nov.	26	7.70	7.68	14.00
Nov.	27	No market		
Weekly Avg.		Raws 7.7175	B'strap.	14.0000
Nov.	28	7.70	7.68	14.00
Nov.	29	No market		
Nov.	30	Sunday		
Dec.	1	7.70	7.68	14.00
Dec.	2	7.70	7.68	14.00
Dec.	3	7.62	7.60	14.00
Dec.	4	7.62	7.60	14.00
Weekly Avg.		Raws 7.6480	B'strap.	14.0000
Dec.	5	7.62	7.60	14.00
Dec.	6	No market		
Dec.	7	Sunday		
Dec.	8	7.62	7.60	14.00
Dec.	9	7.62	7.60	14.00
Dec.	10	7.62	7.60	14.00
Dec.	11	7.62	7.60	14.00
Weekly Avg.		Raws 7.6000	B'strap.	14.0000
Dec.	12	7.62	7.60	14.00
Dec.	13	No market		
Dec.	14	Sunday		
Dec.	15	7.62	7.60	14.00
Dec.	16	7.80	7.78	14.00
Dec.	17	7.80	7.78	14.00
Dec.	18	7.80	7.78	14.00
Weekly Avg.		Raws 7.7080	B'strap.	14.0000
Dec.	19	7.80	7.78	14.00
Dec.	20	No market		
Dec.	21	Sunday		
Dec.	22	7.80	7.78	14.00
Dec.	23	7.80	7.78	14.00
Dec.	24	7.80	7.78	14.00
Dec.	25	No market		
Weekly Avg.		Raws 7.7800	B'strap.	14.0000
Dec.	26	No market		
Dec.	27	No market		
Dec.	28	Sunday		
Dec.	29	7.80	7.78	14.00
Dec.	30	7.95	7.93	14.00
Dec.	31	8.00	7.98	14.00
Jan.	1	No market		
Weekly Avg.		Raws 7.8967	B'strap.	14.0000
Jan.	2	No market		
Jan.	3	No market		
Jan.	4	Sunday		
Jan.	5	8.00	7.98	14.00
Jan.	6	8.00	7.98	14.00
Jan.	7	8.05	8.03	14.00
Jan.	8	8.12	8.10	14.00
Weekly Avg.		Raws 8.0225	B'strap.	14.0000
Jan.	9	8.12	8.10	14.00
Jan.	10	No market		
Jan.	11	Sunday		
Jan.	12	8.12	8.10	14.00
Jan.	13	8.12	8.10	14.00
Jan.	14	8.12	8.10	14.00
Jan.	15	8.12	8.10	14.00
Weekly Avg.		Rawa 8.1000	B'strap.	14.0000

Date		N.Y.	N.O.	B'strap.
Jan.	16	8.12	8.10	14.00
Jan.	17	No market		
Jan.	18	Sunday		
Jan.	19	8.12	8.10	14.00
Jan.	20	8.12	8.10	14.00
Jan.	21	8.12	8.10	14.00
Jan.	22	8.18	8.16	14.00
Weekly Avg.		Raws 8.1120	B'strap.	14.0000
Jan.	23	8.18	8.16	14.00
Jan.	24	No market		
Jan.	25	Sunday		
Jan.	26	8.18	8.16	14.00
Jan.	27	8.18	8.16	14.00
Jan.	28	8.18	8.16	14.00
Jan.	29	8.05	8.03	14.00
Weekly Avg.		Raws	B'strap.	14.0000
Jan.	30	8.05	8.02*	14.00
Jan.	31	No market		
Feb.	1	Sunday		
Feb.	2	8.04	8.02	14.00
Feb.	3	8.04	8.02	14.00
Feb.	4	8.00	7.98	14.00
Feb.	5	8.00	7.98	14.00
Weekly Avg.		Raws 8.0040	B'strap.	14.0000
Feb.	6	8.00	7.98	14.00
Feb.	7	No market		
Feb.	8	Sunday		
Feb.	9	8.00	7.98	14.00
Feb.	10	8.00	7.98	14.00
Feb.	11	8.00	7.98	14.00
Feb.	12	No market		
Weekly Avg.		Raws 7.9800	B'strap.	14.0000
Feb.	13	7.95	7.93	14.00
Feb.	14	No market		
Feb.	15	Sunday		
Feb.	16	7.95	7.93	14.00
Feb.	17	7.95	7.93	14.00
Feb.	18	7.90	7.88	14.00
Feb.	19	7.90	7.88	14.00
Weekly Avg.		Raws 7.9100	B'strap.	14.0000
Feb.	20	7.90	7.88	14.00
Feb.	21	No market		
Feb.	22	Sunday		
Feb.	23	No market		
Feb.	24	7.90	7.88	14.00
Feb.	25	7.90	7.88	14.00
Feb.	26	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000
Feb.	27	7.90	7.88	14.00
Feb.	28	No market		
March	1	Sunday		
March	2	7.90	7.88	14.00
March	3	7.90	7.88	14.00
March	4	7.90	7.88	14.00
March	5	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000

Date		N.Y.	N.O.	B'strap.
March	6	7.90	7.88	14.00
March	7	No market		
March	8	Sunday		
March	9	7.90	7.88	14.00
March	10	7.90	7.88	14.00
March	11	7.90	7.88	14.00
March	12	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000
March	13	7.90	7.88	14.00
March	14	No market		
March	15	Sunday		
March	16	7.90	7.88	14.00
March	17	7.90	7.88	14.00
March	18	7.90	7.88	14.00
March	19	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000
March	20	7.90	7.88	14.00
March	21	No market		
March	22	Sunday		
March	23	7.90	7.88	14.00
March	24	7.90	7.88	14.00
March	25	7.90	7.88	14.00
March	26	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000
March	27	No market		
March	28	No market		
March	29	Sunday		
March	30	7.90	7.88	14.00
March	31	7.90	7.88	14.00
April	1	7.90	7.88	14.00
April	2	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000
April	3	7.90	7.88	14.00
April	4	No market		
April	5	Sunday		
April	6	7.90	7.88	14.00
April	7	7.90	7.88	14.00
April	8	7.90	7.88	14.00
April	9	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000
April	10	7.90	7.88	14.00
April	11	No market		
April	12	Sunday		
April	13	7.90	7.88	14.00
April	14	7.90	7.88	14.00
April	15	7.90	7.88	14.00
April	16	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000
April	17	7.90	7.88	14.00
April	18	No market		
April	19	Sunday		
April	20	7.90	7.88	14.00
April	21	7.90	7.88	14.00
April	22	7.90	7.88	14.00
April	23	7.90	7.88	14.00
Weekly Avg.		Raws 7.8800	B'strap.	14.0000

SEASON'S AVERAGE PRICES:

Raws	7.8774
Blackstrap	13.9420

*Local Sale

IN WASHINGTON

By: Horace Godfrey

Doing Something About Bad Publicity

Recently the Press-Scimitar in Memphis published an editorial entitled "Farm Bill Shenanigans" which was very critical of farm progams and farm payments. This editorial is one of many appearing in newspapers throughout the country. There has come to my attention a reply to this editorial written by a farmer from Tyronza, Arkansas, Mr. C. L. Denton, Jr. Mr. Denton is a former ASCS State Committeeman and has farmed all of his life. His reply is well worth reading. Space does not permit his full reply but the following are excerpts from it.

"THE NEED for a farm program was initiated in 1789 when our Congress enacted the first tariff act to protect fledgling industry in our United States. By this action, subsidy became one of the oldest economic principles written into U. S. laws. Subsidy and subsidy-like programs have helped develop U. S. banks, housing groups, colleges, airlines, railroads, waterways, merchant fleets and many other businesses and industries. Your newspaper benefits from what amounts to subsidy from the post office. But without the development of these businesses and industries, including yours and mine, our United States would not be the world power it is today. So subsidies do have their place in this society.

"But when the question arises today, 'Why can't American farmers operate without a subsidy in a free economy like everybody else?'—the simple answer is that other groups are not in a completely free economy. Industry groups—both management and labor—have a means of acting together for bargaining and strength. Professional people have institutions of control that represent their interests.

"And there is nothing wrong with this. But the farmer—of all major economic groups—is the only one without a broadly effective means of advancing his objectives in the arena of supply and demand. He pays minimum wages to his farm workers as required by his government; he pays union scale wages in his purchases of farm machinery, autos and trucks, various fuels, rubber goods, insecticides and herbicides, etc.; and he pays taxes to support an economy that includes many other subsidies. How, then, can your American farmer survive when he is buying in a "protected" market unless he, too, is given some 'protection' on the sale price of his product?

"THE FARMER has no means of organizing effectively to regulate prices and production, as industry, labor and the professions do. Even if the farmer had the power to balance production exactly with demand at a certain price level, it might not be good for the national interest to permit this. So, shouldn't the government have the responsibility of helping manage this abundance? And shouldn't the farmer who cooperates in this program—which is in the national interest—be permitted to receive the benefits of the program in which he is participating?

"I WOULD LIKE to emphasize that 'farm polcy is not something separate.' It is a part of an overall effort to serve our national interest at home and around the world. Agriculture is not

SEASON AVERAGE PRICES

SEASON	RAWS (Cents Per Lb.)	BLACKSTRAP (Cents Per Gallon)
1935-36 (Oct. 18 - Feb. 28)	3.2316	6.0940
1936-37 (Oct. 16 - Feb. 25)	3.6660	6,1700
1937-38 (Oct 8 - Feb. 24)	3.1924	5.3278
1938-39 (Oct. 14 - Feb. 23)	2.8195	2.9976
1939-40 (Oct. 13 - Mch. 29)	2.9229	5.0890
1940-41 (Oct. 10 - Mch. 28)	2.9729	6.4087
1941-42 (Oct. 10 - Apr. 2)	3.6121	16.1862
1942-43 (Oct. 9 - Apr. 1)	3.7300	17.8245
1943-44 (Oct. 8 - Mch. 30)	3.7300	18,0000
1944-45 (Oct. 13 - Mch. 29)	3.7500	17.6737
1945-46 (Oct. 12 - Jan. 31)	3.7500	18.0000
1946-47 (Oct. 11 - Jan. 30)	5.8167	18.0000
1947-48 (Oct. 3 - Jan. 29)	6.2060	26,7617
1948-49 (Oct. 8 - Jan. 27)	5.6184	9.6998*
1949-50 (Oct. 7 - Jan. 26)	5.8181	5.6417
1950-51 (Oct. 6 - Jan. 25)	6.1941	29.2297
1951-52 (Oct. 19 - Jan. 31)	5.8223	28.6800
1952-53 (Oct. 10 - Jan. 29)	6.2088	8.8016
1953-54 (Oct. 9 - Feb. 25)	6.0932	10.0087
1954-55 (Oct. 8 - Feb. 24)	5.9592	9,7477
1955-56 (Oct. 7 - Apr. 26)	5.8934	10.7797*
1956-57 (Oct. 5 - Apr. 25)	6.1783	25.7443*
1957-58 (Oct. 11 - Feb. 22)	6.1287	12,6885
1958-59 (Oct. 10 - Feb. 26)	6.2312	12.5653
1959-60 (Oct. 9 - Jan. 28)	6.1819	9.1907*
1960-61 (Oct. 7 - Jan. 26)	6.4828	13.0843*
1961-62 (Oct. 6 - Feb. 22)	6.3153	12.0694
1962-63 (Oct. 5 - Feb. 28)	6.5784	18.3567
1963-64 (Oct. 4 - Feb. 27)	8.9952	18.6008
1964-65 (Oct. 2 - May 13)	6.5403	8.2562
1965-66 (Oct. 1 - Apr. 28)	6.8191	9.5371
1966-67 (Oct. 7 - Apr. 27)	7.1414	16.6379
1967-68 (Oct. 6 - Apr. 25)	7.3531	14.9379
1968-69 (Oct. 4 - Apr. 24)	7.6583	10.5655
1969-70 (Oct. 16 - Apr. 23)	7.8774	13.9420

*1948-49 Blackstrap period ended March 31, 1949
1955-56 Blackstrap period ended February 23,1956
1956-57 Blackstrap period ended February 28, 1957
1959-60 Blackstrap period ended April 28, 1960
1960-61 Blackstrap period ended April 27, 1961

an 'island'; it is an integral part of our economic continent and national strength. The two basic goals of our farm policy are: Better income for farmers and balanced abundance for our consumers. There is no contradiction between the two. Both goals must be simultaneously sought and achieved. A farm policy that sought one and not the other would be unrealistic. A farm program which achieved one and not the other would be a failure."

HELP WANTED

Shop foreman for agricultural shop on large sugarcane farm in South Louisiana CONTACT: THE SUGAR BULLETIN 414 Whitney Bldg., New Orleans, La. 70130.

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☐ **EFFICIENCY: Fall application of "Sinbar" keeps seedbeds clean through winter—allows early drying.**

☐ **ECONOMY: Costly multiple treatments are eliminated when "Sinbar" is used as it gives positive, dependable control with either a single treatment in the spring or through use of "split" applications—one in the fall and one in early spring. An easy-to-use wettable powder, "Sinbar" readily**

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IN THE FIELD

By: Lloyd L. Lauden

L. 62-96, C.P. 61-37, L. 60-25 Brittle

Localized windstorms, with winds reported to be approximately 70 miles per hour, broke tops off L. 62-96, C.P. 61-37 and L. 60-25. These winds happened about five weeks ago and were more severe in the Western part of the State. In some cases, top breakage was as high as 40 per cent. The more severe winds were extremely localized as evidenced by the fact that certain cuts of cane on some farms were badly damaged while nearby cuts of the same variety on the same farm were hardly touched. Other factors, however, could have influenced this type damage. One factor which may have influenced breakage to a great extent is the growth rate immediately preceeding the windstorm. In some areas there had been a rather extended drought and then the rains came. Cane grew rapidly after the rainfall and this caused brittleness. It appears from limited surveys that plant cane broke more than stubble cane but some tops were also broken out of stubble cane.

Growers can be assured that the three agencies, L.S.U. at Baton Rouge, La., the U.S.D.A. in Houma, La. and at Canal Point, Fla., and the League are doing everything possible to give growers canes which are not brittle and have other desirable characteristics such as high sugar per ton, early sucrose, and good yield of cane per acre.

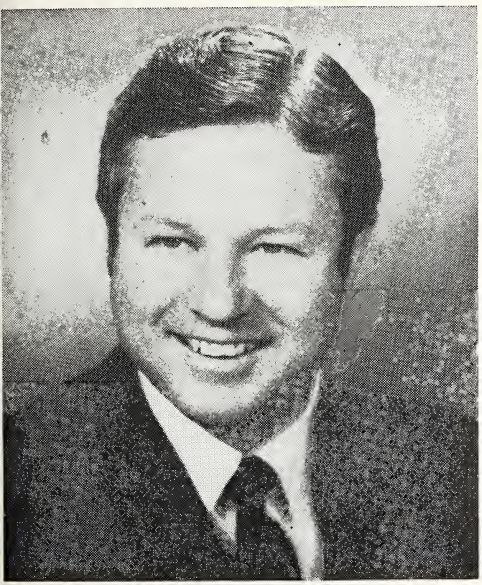
At the time L. 60-25 and C.P. 61-37 were released, the Variety Release Committee of the three agencies were not aware that these two canes were brittle to any great degree. The committee was certainly not aware of the brittleness of these canes in the month of July. Information on brittleness has been taken usually in September and later and these tests have been made primarily for brittleness at harvest. Brittleness tests have not been made earlier during the year on the many varieties in the program. In addition to observations in plots, brittleness tests are now made with a mechanical device and this is a rather recent innovation.

In the case of L. 62-96 the Committee knew that there was a tendency toward some brittleness in that variety. In September of 1968, reports from Messrs. Denis and Piere Lanaux of Lucy, La. and Mr. Kenneth Kahao of Port Allen, La. indicated 10 per cent of the tops were knocked out by local windstorms. Although L. 62-96 was located at more than 40 other stations throughout the belt in that year there was no evidence of breakage observed elsewhere. However, in early September of 1969, the year the variety was released, some tops were broken off by localized windstorms in the Donaldsonville, La. area. The breakage was not severe and did not greatly affect yield. The decision had already been made to release the variety. The variety had other highly desirable characteristics and the committee felt the industry could use the variety to an advantage because of its early high surcrose. In the future there may be a need to take brittleness tests earlier in the year for windstorm reasons.

It appears from the limited number of counts made of breakage, L. 62-96 breaks to a greater degree than the two other varieties mentioned. However the breakage in the other two varieties was by no means slight.

Growers will be pleased to learn that there is at this time many new promising varieties in the program. There is a good possibility, that several of these new varieties will be transferred to Secondary Stations this fall. There has been no evidence of windstorm damage in these canes so far, nor has brittleness been bad late in the year. It should be pointed out, however, these canes were located at a very few places in the belt and the exposure to windstorms at many locations has not yet taken place. Exposure over longer periods and at greater number of locations will yield more information.

RAMON E. BILLEAUD



KING SUCROSE XXIX

Ramon E. Billeaud, president of Levert—St. John, Inc. and J. B. Levert Land Co., Inc., whose agricultural operations are in St. Martin and Lafourche Parishes, has been selected as King Sucrose XXIX to serve in the Louisiana Sugar Cane Festival and Fair in New Iberia, Louisiana on September 25, 26, 27, 1970.

Billeaud, who succeeds Joseph G. Beaud of Sugarland Plantation in Pointe Coupee Parish, follows in the footsteps of his late father, George L. Billeaud, who served as King Sucrose II.

The new King Sucrose enjoys a heritage of sugar plantation life as both the paternal and maternal sides of his family were sugar planters in Lafayette parish. His mother was the former Beatrice St. Julien.

Billeaud joined the Levert Companies in 1967 as executive vice-president and was elevated to his present position in June of 1969.

The Levert Companies have administrative offices in New Orleans with agricultural operations in St. Martin and Lafourche parishes. They currently have a 3,000 acre sugarcane quota on these farms and operate the St. John raw sugar mill at St. Martinville.

Prior to joining the Levert organization, Billeaud was employed by the Billeaud Sugar Factory in Broussard from 1953 to 1967.

The new King Sucrose attended elementary and high school at St. Cecilia School in Broussard and received his B. S. degree in Business Administration in 1950 from Southwestern Louisiana Institute in Lafayette.

He served in the U. S. Air Force from August 1950 to August 1953.

King Sucrose XXIX enjoys membership in such organizations as the Louisiana Land and Royalty Owners Association, American Society of Sugar Cane Technologists, Executive Committee of American Sugar Cane League, Board of Director of the Louisiana Sugar Exchange Inc., Knights of Columbus, Mid-City Kiwanis Club and International House.

He is also chairman of Mill Marketing Allotment Committee of the Louisiana Sugar Industry.

He has enjoyed membership in such organizations as a board member to the Louisiana Sugar Cane Festival and Fair Assn. from Lafayette, the Lafayette Airport Commission, Democratic State Central Committee and Broussard Town Council.

Married to the former Azelia "Chuckie" Leblanc of Abbeville, they reside with their five children Ramon Edward, Jr., Marguerite Louise, Henry Maurice, Mary Elizabeth and Beatrice Ann at 1338 Broadway, New Orleans.

SUGARCANE VARIETY OUTFIELD EXPERIMENTS IN LOUISIANA IN 1969 WITH A SUMMARY FOR THE 3-YEAR PERIOD 1967-69

H. P. Fanguy[1]

Introduction

The Sugarcane variety outfield testing program is conducted on a cooperative basis. The U.S. Department of Agriculture and the Louisiana Agricultural Experiment Station, cooperating with the American Sugar Cane League, obtained data from 11 light soil and 3 heavy soil locations during 1969. The 3 agencies are deeply grateful to the owners and management of these plantations for their unselfish contributions to the variety testing program.

The main purpose of the outfield experiments is to obtain yield data on new experimental and commercial varieties. The outfield experiments also served other functions during 1969. Pathologists made mosaic counts at 7 locations, and mosaic spread was observed in replicated tests for all varieties. Mosaic counts were also made on the C.P. and L. 1965 series which were introduced to 14 outfield locations during 1968. The data indicated that the varieties, C.P. 65-350 and L. 65-69, had a high degree of mosaic resistance (1). Entomologists made bored-joint counts at several locations to determine the level of borer infestations on several varieties. Cane samples were taken at several locations to determine if there were variations in fiber content in different areas.

The variety subcommittee released L. 62-96 for commercial production during 1969. This variety has been in the variety outfield testing program for 3 years. L. 62-96 yields approximately the same as L. 60-25 in sugar per ton of cane and is similar in maturity. The variety has also produced good yields in tons of cane per acre. L. 62-96 is moderately susceptible to mosaic; it is more susceptible than C.P. 48-103 but less susceptible than C.P. 52-68.

Experimental Techniques

The procedure for planting, cultivating, fertilizing, harvesting and sampling the variety outfield experiments have been described in previous publications (2) (5). All the plots were weighed with a tractor mounted weighing device equipped with an accurate hydraulic scale (3).

Seasonal Conditions

Louisiana sugarcane farmers were fortunate to miss the hurricane force winds of hurricane Camille on August 17. If Camille had entered the center of the sugarcane area, the industry would have suffered heavy losses. Estimated peak gusts were 65 MPH at Galliano and 60 MPH at Laplace. These towns are on the extreme Eastern part of the sugarcane growing area. Some lodging and stalk breaking was observed in these areas as a result of the hurricane.

Many locations in the sugarcane area received less than adequate rainfall and lower tonnage was the result. The low tonnage was offset by record high yields in sugar per ton of cane.

Harvesting procedures advanced at a very rapid rate because of the dry harvesting season and generally erect sugarcane. Many mills completed grinding operations during a 2-month period. The outfield tests were harvested during the short grinding season because of good equipment supplemented by plantation owned mechanical harvesters.

[1]Research Agronomist, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana. Based on results obtained cooperatively with Mike Giamalva, Associate Professor, Louisiana State University, Agricultural Experiment Station, Baton Rouge, Louisiana and Earl Hicks and Howard Robichaux of the American Sugar Cane League.

1969 Results
Light Soil Tests

The combined analyses of data from several 1969 light soil tests are found in Tables 1-3. C.P. 62-258 and L. 62-86 have been dropped from the variety program for the following reasons. Both varieties were too susceptible to cold damage. C.P. 62-258 was severely stunted by mosaic in areas of high spread. L. 62-86 was very susceptible to sugarcane borer damage. The varieties C.P. 61-37, L. 60-25, and L. 62-96 are superior in sugar per acre to C.P. 62-258 and L. 62-86.

C.P.52-68, the most widely planted variety in Louisiana, was used as the commercial standard during 1969 (4). It is no longer possible to rogue C.P. 52-68 at most locations due to its susceptibility to mosaic disease; C.P. 52-68 with low levels of mosaic continues to produce good yields. The main advantages of the variety are erectness, resistance to borers and stubbling ability.

L. 64-67 produced the highest sugar per ton yields in the combined plant cane experiments (Table 1). It was the highest in sugar per ton of cane and sugar per acre. L. 64-67 was lower than C.P. 61-37 in tons of cane per acre. Infield results (data not shown) indicate that the variety produces low yields in stubble crops. L. 64-67 is rated moderately susceptible to mosaic disease. L. 64-30 produces good yields, being equal to L. 62-96 in tons of cane per acre, sugar per ton of cane and sugar per acre. The main disadvantages of L. 64-30 are its high susceptibility to mosaic disease and cold. C.P. 64-388 produced good yields in tons of cane per acre and sugar per ton of cane. It was exceeded by L. 62-96 and C.P. 61-37 in sugar per acre. The variety is moderately resistant to mosaic but has taken considerable mosaic in heavy spread areas. C.P. 64-388, L. 64-30 and L. 64-67 exceeded C.P. 52-68 in tons of cane and sugar per acre in plant cane.

L. 62-96 was the highest in sugar per acre in first and second stubble combined analyses during 1969. The variety was equal to C.P. 61-37 and L. 60-25 in sugar per acre in the plant cane experiments. L. 62-96 was particularly outstanding in sugar per ton of cane in all experiments. L. 62-96 should complement the other commercial varieties since it is an erect variety well-suited to merchanical harvesting. L. 62-96 is moderately susceptible to mosaic and has become heavily infected in high spread areas.

C.P. 61-37 was the highest yielding variety in tons of cane per acre in plant cane; it also yielded well in first and second stubble. This variety was equal to C.P. 52-68 in sugar per ton of cane in the plant cane but lower in first and second stubble. Growers should not harvest this variety early in the season because of its relatively late maturity and resistance to cold. Like C.P. 48-103, which has acceptable mosaic resistance, C.P. 61-37 is moderately resistant to mosaic.

L. 60-25 was better than C.P. 52-68 in tons of cane per acre in plant cane, equal in first stubble and lower in second stubble. The variety was better than C.P. 52-68 in sugar per ton of cane in all experiments. L. 60-25 is susceptible to mosaic and seed cane can no longer be rogued at many locations.

1969 Results
Heavy Soil Tests

Plant cane combined analyses of data from 3 1969 heavy soil tests are in Table 4. The heavy soil results are similar to light soil with the exception of L. 62-96. The variety has not yielded as well on heavy soil, and currently is not being recommended for the heavier soil types. L. 60-25 was equal to C.P. 52-68 in tons of cane per acre and higher in sugar per ton of cane and sugar per acre. L. 60-25 continues to be a high-yielding variety on heavy soils, and can be harvested from these areas early in the season because of its early maturity.

First stubble results were obtained on heavy soils during 1969, but are not included owing to unreliable variations between locations.

(Continued on page 292)

SUMMARY OF FINAL MANUFACTURING REPORTS

FLORIDA SUGARCANE FACTORIES—1966, 1967, 1968 AND 1969 CROPS*

	1966	1967	1968	1969
Crop days, average	107	122	96	99
Lost time, % total time	6.27	6.94	7.33	11.52
CANE: Tons Ground,				
gross weight	6,419,286	6,889,282	5,638,729	5,469,954
net weight	6,057,294	6,542,451	5,367,659	5,196,840
% Total cane ground	100.00	100.00	100.00	100.00
Tons ground per hour	276.19	280.63	294.36	289.42
Extraction, N.J., % cane	77.46	76.73	76.86	77.37
Sucrose extraction, %	92.29	92.49	92.42	92.97
Maceration, % cane	18.06	18.07	17.17	18.22
Fibre, % cane	11.06	11.57	11.26	10.62
Java ratio	79.35	78.48	78.73	78.66
ANALYSES:				
Crusher juice Brix	17.70	18.08	17.14	17.15
Crusher juice sucrose	14.85	15.30	14.25	14.40
Brix factor	96.95	96.96	97.02	97.03
Sucrose factor	94.55	94.58	94.67	94.51
Normal juice Brix	17.16	17.53	16.63	16.64
Normal juice sucrose	14.04	14.47	13.49	13.61
Normal juice purity	81.79	82.56	81.12	81.81
Factory sirup Brix	61.57	60.67	60.28	54.81
Residual juice Brix	6.29	5.91	5.37	4.94
Residual juice purity	74.97	75.41	74.23	74.07
Bagasse, % sucrose	3.42	3.29	3.13	2.97
Bagasse, % moisture	53.74	53.41	54.27	54.32
Bagasse, % fibre	41.67	42.19	41.46	39.61
Press cake, % sucrose	3.22	3.18	3.99	2.92
SUCROSE BALANCE:				
B/S Mols. Sucrose in % cane	1.036	1.038	1.025	1.045
Undetermined, Sucrose in % cane	.138	.131	.116	.128
Press cake, Sucrose in % cane	.116	.120	.106	.138
Bagasse Sucrose in % cane	.909	.902	.850	.796
Total losses Sucrose in % cane	2.199	2.191	2.097	2.107
Sugar Sucrose in % cane	9.584	9.817	9.122	9.219
Cane, total suc. in % cane	11.783	12.008	11.219	11.327
Lbs. 96° Sugar M&E T/Cane	199.67	204.52	190.03	192.07
Gals. B/S Mols. 80° Brix T/Cane	6.23	6.18	6.47	6.35
Boiling House Efficiency	96.76	96.55	97.01	96.09

*Gross Cane Weight Basis

OUTFIELD EXPERMENTS . . .

(Continued from page 291)

1967-69 Results
Light Soil Tests

The combined analyses of data from several light soil tests during 1967-69 are found in Tables 5-7. The data for the 3-year period is similar to the 1969 results.

L. 62-96 was the highest-yielding variety in sugar per acre in plant cane and first stubble tests. This new commercial variety could not be included in the second stubble combined analysis because only 1969 second stubble results were obtained.

C.P. 61-37 was the highest yielding variety in tons of cane per acre for the plant cane and second stubble experiments. It was equal to L. 62-96 in first stubble tonnage. L. 60-25 was one of the highest yielding varieties in sugar per ton of cane in all crops. The variety was lower than C.P. 52-68 in

tons of cane per acre in the plant cane and second stubble experiments and equal to it in first stubble.

C.P. 55-30 had the lowest yields in the 3 crops in sugar per acre. This was primarily due to low sugar per ton yields; and the variety is no longer recommended for sugarcane production.

Table 1. Plant Cane combined analysis from 9 U.S.D.A. and L.S.U. outfield locations on light soil during 1969.

Variety	Yield of cane per acre 1/	Yield of Sugar per ton of cane	Yield of Sugar per acre
	Tons	Pounds	Pounds
L 64-67	30.19 b	255.4 a	7711 a
L 62-96	29.25 b c d	247.6 b	7242 b
CP 61-37	32.52 a	219.7 d	7145 b
L 64-30	29.50 b c	242.0 b	7139 b
L 60-25	28.35 d	245.8 b	6968 b c
CP 64-388	29.71 b c	226.6 c	6732 c
L 62-36	28.03 c d	223.2 c d	6435 d
CP 62-258	27.38 e	227.7 c	6234 d e
CP 52-68	27.08 e	223.7 c d	6058 e
CP 55-30	26.52 e	213.5 e	5662 f

1/ Means followed by the same letter are not significantly different at the 5% level of probability according to the Duncan Multiple Range Test.

Table 2. First Stubble combined analysis from 8 U.S.D.A. and L.S.U. outfield locations on light soil during 1969.

Variety	Yield of cane per acre 1/	Yield of sugar per ton of cane	Yield of sugar per acre
	Tons	Pounds	Pounds
L 62-96	27.89 a	251.4 a	7012 a
L 60-25	24.75 c d	243.6 b	6029 b
CP 52-68	25.65 b c	227.0 c	5823 b c
CP 48-103	23.65 d	241.1 b	5702 c d
CP 61-37	26.40 b	212.7 d	5615 c d
CP 62-258	23.96 d	226.4 c	5425 d e
L 62-36	24.04 d	219.7 c d	5282 e
CP 55-30	24.51 d	215.3 d	5277 e

Table 3. Second Stubble combined analysis from 5 U.S.D.A. and L.S.U. outfield locations on light soil during 1969.

Variety	Yield of cane per acre 1/	Yield of sugar per ton of cane	Yield of sugar per acre
	Tons	Pounds	Pounds
L 62-96	29.71 a	236.7 a	7032 a
CP 62-258	28.03 b c	220.3 b	6175 b
CP 61-37	28.98 a b	191.8 d	5558 c
L 60-25	22.89 e	234.9 a	5377 c d
CP 52-68	24.59 d	216.3 b c	5319 c d
L 62-36	25.01 d	209.9 c	5250 c d
CP 55-30	27.35 c	187.1 d	5117 d

Table 4. Plant cane combined analysis from 3 U.S.D.A. and L.S.U. outfield locations on heavy soil during 1969.

Variety	Yield of cane per acre 1/	Yield of sugar per ton of cane	Yield of sugar per acre
	Tons	Pounds	Pounds
CP 64-388	29.52 a b	217.3 b	6415 a
L 64-30	27.30 b c	228.2 a	6230 a b
L 64-67	26.32 c d	227.5 a	5988 a b
CP 61-37	30.24 a	197.0 c d	5957 a b
L 60-25	27.20 b c d	216.5 b	5889 a b
L 62-96	26.90 b c d	212.7 b	5722 b c
CP 62-258	27.32 b c	194.5 c d	5314 c
L 62-36	26.29 c d	199.6 c	5247 c
CP 52-68	24.56 d e	184.3 e	4526 d
CP 55-30	23.50 e	188.0 d e	4418 d

Table 5. Plant cane combined analysis from 26 U.S.D.A. and L.S.U. outfield locations on light soil during 1967-69.

Variety	Yield of cane per acre 1/	Yield of sugar per ton of cane	Yield of sugar per acre
	Tons	Pounds	Pounds
L 62-96	29.32 b	238.7 a	6999 a
CP 61-37	31.52 a	206.7 d	6515 b
L 60-25	27.63 d	233.7 a	6457 b
L 62-36	28.77 b c	213.7 c	6148 c
CP 52-68	28.74 b c	209.4 d	6018 c d
CP 62-258	26.82 e	218.8 b	5868 d
CP 55-30	28.41 c	200.2 e	5688 e

Table 6. First stubble combined analysis from 16 U.S.D.A. and L.S.U. outfield locations on light soil during 1968-69.

Variety	Yield of cane per acre 1/	Yield of sugar per ton of cane	Yield of sugar per acre
	Tons	Pounds	Pounds
L 62-96	29.96 a	247.2 a	7406 a
CP 62-258	27.89 b	224.6 c	6264 b
L 60-25	25.74 c	241.0 b	6203 b
CP 61-37	29.32 a	205.8 e	6034 b c
L 62-36	27.24 b	215.5 d	5870 c d
CP 52-68	25.89 c	220.1 c d	5698 d
CP 55-30	25.23 c	206.7 e	5215 e

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(Continued on page 297)

MECHANICAL PLANTING OF SHORT SEEDPIECES OF SUGARCANE

By G. T. A. Benda and R. D. Breaux[1]

Experiments have been conducted to consider the optimal length of the sugarcane seedpiece for Louisiana conditions. The results show that long seedpieces are more desirable than short seedpieces. The whole stalk is best for early summer planting, and the whole stalk cut in half (to facilitate placement) is best for late summer or fall planting (Coleman and Abbott, 1954).

To increase a variety quickly, planting short seedpieces can be desirable (Taggart and Simon, 1933). Occasionally, the results of a field experiment indicate that shorter seedpieces (12 inches) may yield as well as longer (R. M. Ramp, unpublished). Arceneaux (1948), Coleman and Abbott (1954), and Hebert (1956) agree that even though yield of cane is less from short seedpieces (1 to 3 buds), the shorter seedpieces germinate better than the longer seedpieces (5 buds or more). Single-eye seedpieces produce cane comparable to that planted in the conventional manner when transplanted from the greenhouse in early April (R. Matherne and G. Benda, unpublished). Seedling nurseries are routinely established in April by transplanting single seedling plants to the field at 16-inch intervals. Although these plants have very limited reserves and no seedpiece at planting, these nurseries usually yield in excess of 30 tons of cane per acre and consistently give good plant-cane stands.

It is not likely, then, that lesser yields result from use of short seedpieces as such. More likely, the lesser yields result from winter stresses. The short seedpieces germinate well, but they quickly decay. While the short seedpiece decays during the winter in soils that are generally wet and cold, freezing temperatures destroy all exposed cane aboveground. The short seedpiece cannot provide the young shoot with sufficient reserves to replenish losses due to freezing. There are no reserves of ungerminated buds, as would be on whole stalks, to replace damaged or killed shoots. Therefore, "gaps", or imperfect stands result.

Presumably, good plant-cane stands could be established from short seedpieces and good yields obtained if the following conditions are met: (a) the planting rate and procedure should provide for the immediate establishment of the minimum number of stools required to yield a full stand of cane; (b) planting must be early so as to produce well-tillered stools and adequate reserves of food and germinable eyes before freezing occurs; (c) the young plants must be protected as much as possible from freezing temperatures.

This paper reports the results of a field experiment in which the yields of cane from mechanically-handled, summer-planted short seedpieces are compared to yields from cane planted in the fall in the conventional manner.

Materials and Methods

Yields of cane and sugar per acre were compared for plots planted with short seedpieces (6-inches long) and plots conventionally planted with whole stalks. Four commercial varieties of sugarcane—C.P. 52-68, C.P. 55-30, C.P. 61-37, and L. 60-25—were used. Four 1/147 acre plots (3

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rows, each 16½ ft. long) of each of the eight treatment combinations were established on light soil (commerce silt loam) in good tilth. The short seedpieces were planted on August 7, the conventionally planted stalks on September 26, 1968.

The short seedpieces were prepared from freshly harvested whole stalks. Seedpieces were rejected that had no buds or cut buds. These seedpieces could be identified without removing the enveloping leaf sheaths. The seedpieces probably had one or two buds. The seedpieces were dipped in methoxyethyl mercury chloride (Neantina)* for about 1 min at the recommended concentration, then placed to dry. A thundershower wet the soil and made immediate planting impractical so the seedpieces were stored in polyethylene bags at about 50°F for two days.

The short seedpieces were planted with a Holland transplanter*. This machine is designed to transplant plants in small peat pots. The machine opens the row, sets plants at a depth of 4 inches, and then covers the young plants. The transplanter can be used for sugarcane seedpieces with no special adaptation; it was adjusted to set the seedpieces 12 inches apart. The short seedpieces were hand-fed into the machine in lieu of the peat pots, and the machine set these seedpieces vertically in the ground. The machine had to be fed too rapidly to allow the operator to identify whether the seedpieces were placed with the younger end facing up or down. Because the opening in the machine to accommodate the pots was larger than the diameter of the seedpieces, the machine occasionally dropped seedpieces which then had to be planted by hand. The machine did not firm the soil around the seedpieces sufficiently and left seedpieces exposed. To correct this last problem, we moved soil to the top of the seedpiece with a pair of small cultivating discs.

Irrigation was not needed, and no herbicides were used until after the whole stalks had been planted. The plots were hoed once and cultivated to control weeds.

The plots planted with whole stalks were treated as is routinely done for fall planting. The rows were opened, the stalks were placed horizontally at a rate of two running stalks and a one-third lap. The seed canes were covered with 3 to 4 inches of soil.

Both the short seedpieces and whole stalks were planted on relatively shallow rows that were gradually built up. On October 17, 2 inches were added to the row height, and, on October 28, another 3 inches were added with cultivation tools. This raised the soil to the level of the top dewlap for both main shoot and tillers.

After the rows were built up, the experimental cane was grown according to usual farm practice. This included off-barring, fertilizing, cultivating, and treating with herbicides and pesticides at the appropriate times. The plots were harvested and weighed on November 19, 1969. Brix and sucrose data were obtained from 20-stalk samples from each plot.

Results

The planting ratio, or the average number of row-feet planted per row-foot of seedcane, was greater for plots planted with short seedpieces than for plots planted with whole stalks even though seedcane for the short seedpieces was cut more than 6 weeks earlier. The planting ratio for the short seedpieces for all varieties except C.P. 52-68 was better than 20 to 1.

The germination rate of the short seedpieces was high. After 3 weeks, the overall germination was 56%. Ten weeks after planting, when the later-

*Neantina is the trademark name for a formulation prepared for the Brazilian market by Farbenfabriken Bayer A. G., Leverkusen, Germany. A sample of Neantina was kindly supplied by the manufacturer.

The transplanter was manufactured by the Holland Transplanter Company of Holland, Mich.

Mention of a trademark or proprietary product does not constitute a guarantee or warranty of the product by the U.S. Department of Agriculture, and it does not imply approval to the exclusion of other products that may also be suitable.

planted whole stalks were just beginning to germinate, the germination ranged from 59% for C.P. 52-68 to 84% for C.P. 55-30 based on counts of seedpieces present. The average number of shoots per stool ranged from 4.2 for C.P. 55-30 to 6.5 for L. 60-25.

The winter of 1968-69 was relatively mild, and shoots from short seedpieces as well as from conventionally planted cane showed a center of green throughout the winter indicating that the base of the spindle had not been frozen. In the spring, the short seedpiece-planted cane appeared somewhat more gappy than did the conventionally planted cane. Growth was excellent throughout the summer in all plots.

The yield of cane of the four varieties planted by either method are shown in Table 1. There were highly significant differences among the varieties, but these differences were of little interest in this experiment. There was no significant interaction between the varieties and method of planting. Therefore, the yield differences for the two methods were compared as an average of all varieties.

Table 1. Yield of plant cane of 4 varieties planted with 6 in. long seedpieces and with whole stalks.[1]

Variety	Cane per Acre (tons)		Sugar per Acre (lbs.)	
	Seedpiece	Whole Stalk	Seedpiece	Whole Stalk
C.P. 52-68	25.0	22.8	5191	4789
C.P. 55-30	30.6	28.7	5920	5274
C.P. 61-37	33.2	32.4	6840	6562
L. 60-25	30.9	28.9	7867	6818
Average all Varieties	29.9	28.2	6454*	5861*

[1]Seedpieces planted mechanically Aug. 7 and whole stalks planted conventionally Sept. 26, 1968. Cane harvested Nov. 19, 1969.

*Means differ significantly at 5% level of probability.

The plots planted with short seedpieces gave cane yields (29.9 tons per acre) which were not significantly higher than those from plots planted conventionally (28.2 tons per acre). Sucrose per ton of cane was slightly, but significantly, higher in cane planted with short seedpieces. Cane planted with short seedpieces yielded significantly more sugar (6454 lbs. per acre) than cane planted conventionally (5861 lbs. per acre).

Discussion

These results indicate that cane planted as short seedpieces in the summer can yield as well as cane planted conventionally in the fall. The results, however, are not directly comparable to those of earlier workers because we introduced a difference in the date of planting as well as differences in varieties and in methods of preparing and planting the seedpieces.

In planning this experiment, we assumed that certain factors were important for adequate yield from short seedpieces. These factors included summer planting, the use of an effective fungicide, the vertical placement of the seedpiece with one end exposed to the air and neither end waxed, the provision for adequate moisture, and the build-up of row height late in the fall after tillering but before freezing.

Irrigation was not necessary because of the distribution of rainfall that August and September. In a dry summer, irrigation of short-seedpiece plantings would probably be necessary. The lack of irrigation facilities would limit the commercial application of short-seedpiece planting in Louisiana. In other years, wet fields may limit summer planting. The preparation and storage of seedpieces needs to be explored further. Storage might permit the maximum use of good weather.

It was not possible to get a reliable estimate of the operation rate of the transplanter. For practical large-scale

lanting, the operation must be improved by adding a mechanical feed to a multiple row planter.

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UTFIELD EXPERIMENTS . . .

(Continued from page 293)

able 7. Second Stubble combined analysis from 11 U.S.D.A. and L.S.U. outfield locations on light soil during 1968-69.

ariety	Yield of cane per acre 1/		Yield of sugar per ton of cane		Yield of sugar per acre	
	Tons		Pounds		Pounds	
60-25	24.00	d	231.2	a	5549	a
P 61-37	29.18	a	187.9	c	5483	a b
P 52-68	25.27	c	208.3	b	5264	b
P 55-30	26.36	b	183.2	c	4829	c

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ABSTRACTS

Listed below are three abstracts of scientific articles that may be of interest to people in the Louisiana sugar industry. It will be the policy of The Sugar Bulletin to publish selected abstracts from time to time as space permits. However The Sugar Bulletin will only print abstracts prepared in advance. We do not have the personnel or time to read each article and prepare abstracts for publication.

MSMA for Johnsongrass Control in Sugarcane. Rex W. Millhollon, "Weed Science," May 1970 **18** (3) . — Two overhead applications of monosodium methanearsonate (MSMA) at either 4 + 4 or 4 + 2.5 lb/A were required for effective postemergence control of rhizome johnsongrass (Sorghum halepense (L.) Pers.) in ratoon sugarcane (hybirds of the genus Saccharum). Two applications of MSMA in the spring controlled 95% of the Johnsongrass, whereas two applications of 2, 2=dichloropropionic acid (dalapon) at 4.5 lb/A, the standard treatment, controlled only 70%. In heavily infested fields, sugarcane treated with MSMA also outyielded sugarcane treated with dalapon. Sugarcane tolerated MSMA applied before June; the yield of weed-free sugarcane treated with MSMA was not significantly less than that of the untreated control. However, most MSMA treatments, particularly those applied in late spring, caused temporary leaf chlorosis and stunting. Sugarcane sprayed with MSMA before June generally contained no more arsenic in the juice and bagasse at harvest than untreated sugarcane. Applications of MSMA in June or August increased the arsenic content and resulted in concentrations up to 0.45 ppm in juice, and up to 1.68 ppm in bagasse.

Evidence that Ratoon Stunting Disease of Sugarcane is caused by Virus and not Mycoplosma, A.G. Gillespie, Jr., "Phytopathology", May 1970, — Sugarcane leaves respired in full light and the CO_2 evolved could be detected in sorghum or maize photosynthesizing in the same closed system. A combination of radiometric and infra-red gas analysis techniques allowed the estimation of photo-respiration (total CO_2 evolution in light) and photosynthesis at increasing light intensities and of dark respiration. Rates of CO_2 evolution approaching those of temperate zone plants occurred at lower light intensities but rapidly decreased with higher light. Smaller but significant quantities of $^{14}CO_2$ were released even at intensities approximating full sunlight in leaves of maize, sorghum and sugarcane. Highly efficient CO_2 capture may explain the low rates of photorespiration at high light intensities.

Evidence for Photorespiration in Tropical Grasses, James E. Irvine, PHYSIOLOGIA PLANTARUM, 1970 23, 607-612.—Treatment of ratoon stunting disease affected sugarcane (Saccharum tri-specific hybird) with tetracycline compounds did not eliminate the infectious agent from the cane, nor did it affect symptom expression. The evidence presented indicates that a mycoplasma is not the causal agent and does not contradict previous evidence that a virus is. The results illustrate that not all diseases of obscure etiology involve mycoplasma, and provide another example showing that tetracyclines are ineffective against a disease induced by a virus.

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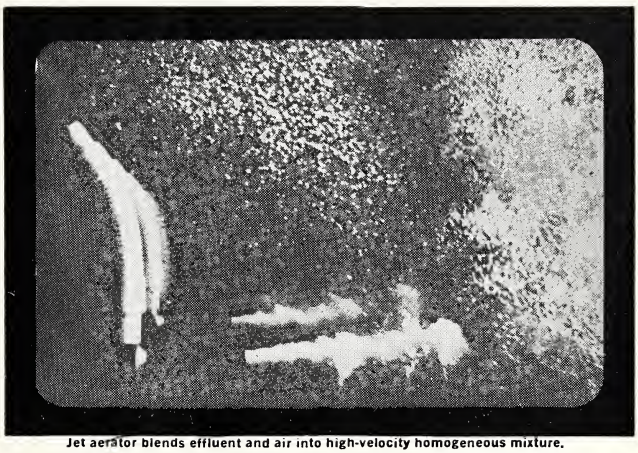

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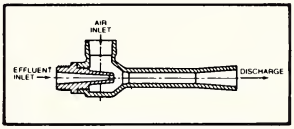

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The Sugar Bulletin

OFFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U. S. A.

STATEMENT BY THE PRESIDENT

On page 309 of this issue of "The Sugar Bulletin" there is a notice of a special meeting of the League's membership. The purpose of this meeting is to act upon the Executive Committee's recommendation to amend that provision of the Charter relating to League dues.

The last increase in League dues was made in 1963. Since that time, many changes have occurred in both the Louisiana sugar industry and the United States economy.

In the last seven years, demands have been made on the League for additional services. Moreover, the constantly changing local and national programs have required the League to act for us in many new areas. These coupled with an inflationary economy have impared the League's financial position.

The need for continuing and accelerating our excellent varietal program and of improving production and harvesting methods is greater today than ever before. All of this will require additional research.

With the Sugar Act up for renewal in 1971, the League must intensify it's efforts to get Louisiana growers and processors adequate acreages and marketing quotas for future years. In addition, we must continue our efforts to keep the price of sugar rising in line with the prices of things we buy.

The increasing complexity of our sugar industry problems makes it important that we have a strong, adequately financed organization.

All members are cordially invited to attend this special meeting. If you can not attend you may vote by completing the proxy on page 309 of this issue. You may instruct the person you appoint as your proxy how he should cast your vote.

I urge all members to vote in favor of the dues increase. This is necessary for our future progress!

Thomas H. Allen
President

Vol. 48—No. 23 **September 1, 1970**

The Sugar Bulletin

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The Official Organ of the American Sugar Cane League of the U. S. A.
Second Class Postage paid at New Orleans, La.
Issued on the 1st and 15th of each month. Subscription: Member 50 cents a year.
Non-Members $5.00 a year. Foreign Countries $8.00 a year.
The American Sugar Cane League is not responsible for issues lost in transit. Back issues supplied, when available, at 50 cents a copy.

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IN WASHINGTON

By: Horace Godfrey

Farm Legislation

A farm bill to establish programs for producers and consumers of dairy products, wheat, feed grains, cotton and other commidities and to extend the Agricultural Trade and Assistance Act of 1954 was passed by the House of Representatives on August 5th by a vote of 212 to 171. This bill replaces the 1965 Food and Agriculture Act and amends certain provisions of the Agriculture Act.

One new feature of farm legislation is included in Title I which limits the payment which can be made to any one person for any one commodity to $55,000. This limitation applies for fetd grains, wheat and cotton. The Senate Committee on Agriculture and Forestry began discussions of the farm bill on Tuesday, August 18th. Chairman Ellender has indicated that he wants to move the bill as fast as possible. Many senators, Agriculture Committee members and others, have stated that the Bill as passed by the House was unsatisfactory. The major complaints are: reduced income for cotton, wheat and feed grain producers; excessive discretionary authority given to the Secretary of Agriculture; elimination of the "parity concept" as a floor for prices for cotton and feed grains; the "set-aside" provisions which would have the effect of reducing the acreage of soybeans throughout the Southeast and mid-South areas; and elimination of special payments and privileges for small cotton, feed grains, wheat farms; and unlimited production of feed grains, wheat or cotton after the farmer has set aside the re-

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By: St. John P. Chilton

IN THE FIELD

By: Lloyd L. Lauden

Planting Time — Sinbar After Cutting Cane

The Louisiana sugar industry is very appreciative of the 15 per cent increase in proportionate shares for the 1971 crop, but this increase certainly makes the job of planting this crop a bigger one. Many growers in Louisiana have recognized this and plans have been usual this year if weather will permit.

There are problems involved in this increased amount of planting, such as, labor shortage, other crops now on the land that should be planted to cane, Johnson grass in poorly followed land, and most of all, the probablity of wet weather during the planting period. In spite of all of this, Louisiana growers needed additional cane acreage to make a fair return from both their investment in land and capital. This increase in acreage will also result in a better use of labor. Rather than plowing land to keep trees and grass from taking over, labor can be used productively plowing in a cane field.

The growing of sugar cane, because of the nature of the plant, is a large volume business. It is becoming more difficult each year for growers of one hundred acres and less to make a decent return from land, capital and their labor.

With a continuing rapid increase in production costs and only a very moderate increase in the price of sugar the only way growers can increase profits and income is by increasing the amount of cane grown.

The planting operation is probably the most important single operation on the farm. A good job in this operation usually means goods stands; and, good stands usually mean good yields of cane per acre. The use of good seed is a must. The cutting of seed, the way it is placed in the planting furrow, and the way it is covred are most important operations. Take good tall cane for seed and set the top knife to top in a joint and not in the area of leaves rolled up. Cane on the furrow should be well lapped so that gaps art not made. Two to four inches of packed soil over cane is all that is needed. Much more cane has been loss as a result of too much soil than from not enough soil over cane. In this writers opinion unless leaves and an occassional top is sticking out of the ground following planting too much soil has been put over seed. Although there is plenty of cane to plant it is important to remember that **haste makes waste.** Do the job correctly. It always pays off.

Sinbar Following Cutting Cane

For least two years now, many growers have been using 2/3 to 3/4 of a pound of sinbar per acre on stubble cane immediately following the cutting of seed. This practice has appeared excellent in the control of grass on fields cut for seed, and the effect of Sinbar has lasted well into the spring. Many of these same growers have used the same amount of Sinbar on stubble of cane cut for the mill. According to many of these growers, this practice has given very good control of grass and the effect has lasted until lay-by. This had been particularly noticable on cane cut late in the season on which Sinbar was applied following harvest.

DOWN THE ROW

By: Earl J. Hicks

The Louisiana Variety Program

Last time we looked at the pre-replicated line trails we saw how the agronomists stepped up their selection pressure and for the first time, potentially new varieties were planted in replicated yield tests. In addition, these new varieties receive their assigned letters (L. or C.P.) according to their place of origin. We are now ready to examine the next step in the Louisiana Variety Program—The Infield Variety Program.

The Infield Variety Program

Agronomists at the infield level receive about 40 new variety candidates. These 40 new candidates are planted into a 2 replicated yield test along with the check varieties, C.P. 52-68, C.P. 48-103, L. 60-25, C.P. 61-37 and L. 62-96. Infield agronomists, like agronomists in earlier stages of testing, screen for all of the same characteristics which constitute a good Louisiana variety.

Later, during harvest, the infield agronomists cut, weigh, run juice analysis and statistically analyze all of the new introductions. Along with this data and past data agronomists can make selections on a much more critical basis. The number of new varieties which are retained after screening now number about 18 or 20. These 18-20 varieties are now planted into 3 replicated yield tests. As before, data is obtained and re-selections are made. **Only** varieties which exhibit outstanding ability in the yield test are replanted again. It is during this phase of testing that both L. and C.P. varieties along with the check varieties are planted together for the first time in a replicated yield test.

During the spring and summer months, agronomists are busy making stand counts, rating and evaluating, screening for mosaic and doing basically the same work which agronomists did in the earlier phases of the variety program. Naturally, with more data available agronomists at this stage are more critical in making selections.

Prior to advancing varieties, agronomists, plant pathologists and plant physiologists from the Louisiana Experiment Station and the U.S.D.A. Sugar Cane Field Station in Houma and agronomists from the American Sugar Cane League meet and determine which varieties are to be advanced to the Outfield Test fields and the League's three primary seed cane increas stations. Some of the more important factors in determining advancement include:

1. Yield data
2. Vigor ratings
3. Sucrose rating with C.P. 48-103 as standard
4. Mosaic data
5. Inversion rating
6. Stubble data
7. Erectness and machine harvesting ability
8. Borer resistance

From the above requirements 5-7 varieties are usually selected for adavncement.

At L.S.U., Mr. E. C. Simon heads the infield variety program. At the U.S.D.A. Sugar Cane Field Station in Houma, Mr. R. J. Matherne handles the infield variety program. It is interesting to note that Mr. Simon and Mr. Matherne represent over 65 years of experience in sugar cane variety testing.

The Outfield Testing Program will be featured next time.

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TO: THE MEMBERS AMERICAN SUGAR CANE LEAGUE OF THE U.S.A., INC.

Notice of Special Meeting

This is to notify you that by order of the Executive Committee, a special meeting of the members of this Corporation has been called to be held on the 24th day of September 1970, at 10:00 o'clock a.m. in the Sans Souci Room of the Holiday Restaurant (Beau Se Jour Motel), on State Highway 182, west of New Iberia, La. The purpose of said meeting is to consider and adopt amendments to Paragraphs One (1) and Two (2) of Article Five (V) of the Charter of this Corporation so that said Paragraphs shall read as follows:

1. PRODUCER MEMBER: An individual, firm or corporation producing or growing sugar cane, but not processing or manufacturing such cane into cane products, shall be a Producer Member. The dues for such membership based on the 1970 crop of sugar cane shall be two cents (2¢) per ton of standard sugar cane produced and sold, and the dues based on the crops of 1971 and subsequent years shall be two and one-half cents (2½¢) per ton of standard sugar cane produced and sold. Producer Members may authorize the owner of the factory purchasing their cane to pay the membership fee for their account.

2. PROCESSOR MEMBER: An individual, firm or corporation (including a cooperative association) operating a sugar factory or factories, processing sugar cane, or operating a farm and a sugar factory or factories growing and processing sugar cane, shall be a Processor Member. The dues for such membership based on the 1970 crop of sugar cane shall be the sum of (1) two cents (2¢) per ton of standard sugar cane processed (including cane produced by such processor) and (2) two cents (2¢) per ton of standard sugar cane produced and processed or sold by such processor; and the dues for such membership based on the crops of 1971 and subsequent years shall be the sum of (1) two and one-half cents (2½¢) per ton of standard sugar cane processed (including cane produced by such processor) and (2) two and one-half cents (2½¢) per ton of standard cane produced and processed or sold by such processor.

If you cannot attend, you may vote by proxy. The form below may be used for that purpose.

GILBERT J. DURBIN
General Manager

- -

New Orleans, Louisiana
September 1, 1970

PROXY

I, (We)_____, a member of the American Sugar Cane League of the U.S.A., Inc., do hereby constitute and appoint_____, or in his absence,_____, my (our) true and lawful proxy in my (our) name, place and stead, to vote upon the membership owned by me (us) and standing in my (our) name, as my (our) proxy, at the special meeting of the members of said American Sugar Cane League of the U.S.A., Inc., to be held on the 24th day of September, 1970, at 10:00 o'clock a.m. in the Sans Souci Room of the Holiday Restaurant (Beau Se Jour Motel), on State Highway 182, west of New Iberia, Louisiana, or at any adjournment or adjournments thereof, and particularly authorize my (our) proxy to vote my (our) membership upon the proposed Charter amendments set forth in the notice of said meeting dated September 1, 1970.

IN WITNESS WHEREOF, I have hereunto set my hand, this_____ day of_____, 1970

_____ _____

Net tons of cane ground from 1969 crop on which League dues were collected. Signature

WITNESS:

_____

THE L.S.U. BREEDING PROGRAM

by St. John P. Chilton
Dept. of Plant Pathology, L.S.U.

The Louisiana Agricultural Experiment Station has been a part of the program for the development of new sugarcane varieties since 1918, through the "Sugar Experiment Station," a part of the Louisiana Agricultural Experiment Station. Prior to this time, at Audubon Park, New Orleans, Mr. H. P. Agee, Mr. R. E. Blouin, and others (including Mr. W. G. Taggart), imported seed from various countries, and the commercial variety, L. 511 resulted.

The first so-called "modern" varieties developed were C.P. varieties, denoting that they originated at the U.S. Sugar Station at Canal Point, Florida. This program, in cooperation with the Louisiana Agricultural Experiment Station, and the American Sugarcane League, resulted in such major varieties as C.P. 29-320, C.P. 34-120, C.P. 36-105 and C.P. 44-101. Others, of course, have been released but never attained dominance.

In 1948, the Louisiana Agricultural Experiment Station became involved in the selection of seedlings and varieties, using seed from Canal Point, Florida. The Department of Plant Pathology was charged with the responsibility of growing the seedlings, planting them in the field, and then turning them over to the Superintendent of the Sugar Station, E. C. Simon, and to the U.S.D.A. Station at Houma for further selection and testing. The major variety, C.P. 52-68 was the result of this selection program. It was released in 1958 and in 1968 covered 49% of the acreage in Louisiana. In all, 447,000 seedlings from Canal Point, Florida-produced seed were grown at Baton Rouge and, except for C.P. 52-68 which was selected by Mr. P. H. Dunckelman from the first 40,000 seedlings grown, no other commercial variety resulted from this work.

A program was started at Grand Isle, Louisiana in 1949 and from 1950-1955, 98,000 seedlings were produced and 69,000 were grown in the field. No commercial varieties resulted from these seedlings.

In 1953, six sugarcane varieties were induced to flower at Baton Rouge, by gradually shortening the daylength. On the basis of this work, it was decided to develop a breeding program based on photoperiod-induced seed. Seedlings from this program and from Canal Point produced-seed were used until 1958, when the Department of Plant Pathology shifted completely to the use of Louisiana-produced seed. Two varieties have been developed from the "L" program, L. 60-25 released in 1966, and L. 62-96 released in 1969.

It must be remembered that the cross which produced L. 60-25 was made in 1956, the seedling was selected in 1958, it was assigned the number L. 60-25 in 1960, and was released in 1966, a period of ten years. Estimates indicate 30-35% of the acreage in Louisiana will be harvested from this variety in 1970. Thus, the crosses have been made and the seedlings are growing in the greenhouse now for the major variety it is hoped will be the dominant variety in 1983. This writer will be retired long before then and probably will not even be here to see this hoped for variety at that time. However, from 1970 to 1979, plans must be made for the varieties which it is hoped will be grown from 1984 through 1993.

Data taken from the annual variety censuses of the U. S. Department of Agriculture are given in Table 1. It may be seen that L.S.U. selected varieties have covered over 50% of the

(Continued on page 311)

acreage in Louisiana in 1968 and 1969. This will probably be true in 1970.

While it is dangerous to predict the future, anyone with 22 years' experience in breeding sugarcanes, should be permitted to give his thoughts. They are:

1. Sugar mills will open the first of October or shortly thereafter, with average normal juice sucroses of 12 or better. This will, when cane is available, increase the grinding capacity of the sugar mills in Louisiana by 10% to 15% without any additional equipment.

2. Sugar recoveries at the mills in Louisiana should average over 200lbs. of sugar per ton of cane (the average for 1969 was about 190 lbs.).

3. Resistance to mosaic, ratoon stunting disease, and other important diseases should be available in one variety.

4. Tonnage per acre, based on the yield of present varieties (C.P. 52-68 and L. 60-25) should go up about 20%. This is in addition to the increases which will come from new agronomic practices.

5. The eventual sugar for certain varieties could be as much as 240 lbs. per ton of cane. This potential is already present in such varieties as L. 64-1.

6. Erectness, non-brittleness, borer tolerance, lower fiber will be available in major varieties.

7. It is believed that a higher level of "cold tolerance" can be achieved. This may come from the potentially very valuable canes which are being selected from crosses with the new **Saccharum spontaneum** clones being introduced into the breeding lines presently in use.

8. With the C.P. program which is also producing varieties (C.P. 61-37), there should be no problem in attaining the above objectives.

Table 1. Percentage of acreage in two varieties selected at the Louisiana Agricultural Experiment Station, Baton Rouge, La. (1960-1969).

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
C.P. 52-68	3	13	18	31	38	41	45	44	49	40
L. 60-25	—	—	—	—	—	—	—	—	2	14
Total	3	13	18	31	38	41	45	44	51	54

It must be pointed out that Mr. P. H. Dunckelman, Dr. R. D. Breaux, Dr. Elias Paliatsteas, Dr. Louis Anzalone, Dr. Robert Falgout, Mr. Anthony DiVittorio, have all worked or are working at L.S.U. With the exception of Dr. Falgout, they are in the two breeding programs at present, (it is hoped in the future), and were and are responsible for the work to date. Mr. E. C. Simon, Superintendent of the Sugar Experiment Station, has been instrumental in the development of these varieties. Also, Dr. Mike Giamalva who handles the Outfield Test Plots for L.S.U. Studies by Dr. Merlin T. Henderson will be very valuable in the development of our program.

IN WASHINGTON

(Continued from page 303)

quired acreage. Any forecast at this time of final action by the Senate Agriculture Committee or the Senate would be premature and hazardous. Existing legislation for cotton, feed grain and wheat farmers as well as for wool producers will expire on December 31st this year unless action is taken by the Congress and approved by the President.

Sugar producers, processors and refiners would like for action to be completed on the general farm legislation before consideration of sugar legislation takes place in 1971.

In another legislative action important to farmers and processors of farm commodities, the President on August 10th signed a bill revising some provi-

sions in the unemployment compensation law. As these revisions were going through the legislative process, the Senate added an amendment including some agricultural workers under the unemployment compensation provisions. The Conference between the Senate and House eliminated the amendment, however, an effort was made to recommit the bill and include agricultural workers. When President Nixon signed the bill he said he regretted farm workers were not included and he plans to suggest to the next Congress to include them.

Hearings on House Resolution 17596 have been held twice a week since early July and will continue through the month of September. This proposed legislation would increase the minimum wage for agricultural workers and eliminate certain overtime exemptions now permitted. A representative of the American Sugar Cane League and the Florida Sugar Cane League have appeared and testified against the proposed legislation. Action on the legislation is not expected during this session of Congress but some action can be expected during calendar year 1971. Throughout the hearings, committee members have expressed serious concern over the continuing decline of representation of agriculture and its related industries in Congress and the increasing alienation of urban Congressmen. Several members of the Committee have commented many times that the alienation of urban congressmen was due in large part to agriculture's failure to communicate its problem to the urban Congressmen.

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The Sugar Bulletin

FFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U. S. A.

ANNOUNCING THE

FORTY-EIGHTH ANNUAL MEETING

OF THE

AMERICAN SUGAR CANE LEAGUE

OF THE

U.S.A., INC.

THURSDAY, SEPTEMBER 24, 1970

SANS SOUCI ROOM

HOLIDAY RESTAURANT (BEAU SE JOUR MOTEL)

on State Highway 182

West of New Iberia

Meeting Convenes at 1:30 P. M.

At this Meeting there will be an election of Members of the Executive Committee to serve during the ensuing year.

All Members of the League Will Please Consider This as an Official Notice To Attend

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Vol. 48—No. 24 **September 15, 1970**

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We stand for the encouragement of Home Industries as against Foreign Competition

IN WASHINGTON

By: Horace Godfrey

A Fantasy

Once upon a time there was a group of people who had the God-given chance to build for themselves a new country. These people had come from many countries and many of them were the oppressed and the unfortunate. They resolved to build on the new shore a different kind of agriculture from what they had known in the past . . . . one that was widely held among many owners. For 300 years they worked in this direction. Land grants to railroads encouraged settlement of the interior. The government passed legislation to provide a free homestead to families who would settle on it and improve it.

Over the years, the government began to help farmers in many ways . . . free and improved seed, research, better ways of planting and cultivating, new harvesting methods, adult education, market research, market news and grading programs . . . . all to give farmers a fair chance in the marketplace and to provide assurance to buyers as well. Commodity programs were developed as a stabilizer. These were not WELFARE or RELIEF programs. This was the farmer's substitute for a trade union, minimum wage or bargaining power.

All of this turned out to be a tremendous success. Abundance became the normal and scarcity the exception. Because the family farm became such a successful provider of food, it helped to make possible a great commercial and industrial society where most people lived in cities and towns and bought their food for less than 1/6 of their take-home pay. All of this abundance assured — for only 1 1/2 cents out of the federal budget dollar. BUT as the people got farther and farther away from the farm, they began to question and complain about the cost of agriculture. They didn't believe that the country really needed three million farmers, so the commodity programs, because of these complaints and because of a non-sympathetic urban society, were allowed to wither away, and the number of farms went downhill from 3 million . . . to 2 million . . . to 1 1/2 million . . . to one million . . . and eventually to 10,000. Bigger machines took the place of smaller machines. People who once were farmers

(Continued on page 322)

NOTICE HIGH YIELD AWARD LUNCHEON

At 12 noon on September 24, 1970 there will be a luncheon at the Holiday Restaurant in New Iberia to honor the growers who made the highest sugar cane yields last year. All League members are invited, and the cost of the luncheon is $4.00 per couple.

If you wish to attend the luncheon, please send your check for $4.00 to the League office (414 Whitney Bldg., New Orleans, La. 70130) immediately in order that we can tell the restaurant the number of meals to prepare.

The League's annual meeting will follow the luncheon. You, of course, are urged to attend that meeting even if you do not attend the luncheon.

IN THE FIELD

By: Lloyd L. Lauden

L.60-25, C.P.61-37 and C.P.48-103 Lodged

Heavy rainfalls and localized windstorms have pushed down and damaged many acres of sugar cane throughout the Louisiana sugar cane belt. Two of the most important varieties, L. 60-25 and C.P.61-37 are lodged to the greatest degree and growers are concerned over the additional cost of harvesting lodged and tangled sugar cane. One reason why these two varieties lodged more than other varieties is the fact that both are heavier in yield of cane per acre. Heavy yielding fields of cane are more susceptible to lodging than lighter yielding fields. A considerable amount of heavy C.P.48-103 is also badly lodged on Bayou Lafouche particularly where stands and height of cane is good. Although a press release by the writer in late August indicated that L.62-96 was also lodged badly, further surveys have indicated that this is incorrect. L.62-96 is erect on many farms where L.60-25 and C.P.61-37 went down flat. From these later surveys it appears that L.62-96 may have good resistance to lodging.

Although the lodged cane looks very bad now, (September 3, the time of this writing) there is time left before harvest for these fields to grow and straighten. Intense sunlight, high temperatures and growth will help straighten this lodged cane. If this had happened in late October or in November these fields would not straighten to any great degree and therefore harvesting cost would be much greater.

There is always reason for concern over any lodged cane because it is always somewhat more costly to harvest lodged fields even after these fields straighten. There is also more cane left in the field after the harvest in lodged fields. This is a loss. In spite of the lodging of these varieties, growers should remember that L.60-25 and C.P.61-37 produce high amounts of sugar per acre, and this makes money. Growers should also remember that C.P.61-37 produces more cane per acre than any other variety. The variety has very good mosaic disease resistance and good resistance to freeze damage.

Growers will be pleased to learn that the Variety Sub-Committee of the Contact Committee of the League composed of members of L.S.U., the U.S.D.A. and the League approved the transfer of two new promising varieties to Secondary Increase Station. These two canes are L.65-69 and C.P.65-350. Both appear to have good yield of cane per acre and excellent resistance to mosaic disease. Sugar per ton of cane appears high in L.65-69 and satisfactory in C.P.65-350. The committee also decided to increase 9 varieties in the 1966 series on Primary Station. In this group two varieties, L.66-48 and C.P.66-376 show excellent resistance to mosaic disease at this time and both of these canes have other good characteristics. It now appears that there has been somewhat of a breakthrough on mosaic disease resistance in the cane breeding program. It would be good if it could be said that these canes will outyield C.P.61-37 in tons of cane per acre or that all of these new varieties will not lodge. This cannot be said. Both L.65-69 and C.P.65-350 appear that they may

(Continued on page 322)

HIGHWAY SAFETY RECOMMENDATIONS OF THE AMERICAN SUGAR CANE LEAGUE

A. Tractor and Wagon Units

1. No more than two wagons should be towed by a tractor on a highway.
2. Tractors should not be operated on highways at night or under foggy conditions.
3. Wagons should be loaded properly so as to avoid spillage and protruding cane.
4. Tractor hauling units should be covered by liability insurance.
5. Tractors and wagons which go on highways should have the following equipment:
   a. Safety chains between the tractor and first wagon and between the two wagons.
   b. A Slow Moving Vehicle emblem on the rear wagon.
   c. Reflectors or lights on the rear wagon.
   d. If a tractor has a cab, it should be equipped with a roll bar and there should be a seat belt for the driver.
6. All tractor drivers should be urged to pull off highway onto shoulder, where possible and permitted, to allow long lines of vehicles to pass.

B. Truck-tractor and Semi-trailer Units

1. Trucks and trailers should comply with width, height, and length regulations.
   a. Maximum width is 96 inches (8 feet).
   b. Maximum height (loaded or unloaded) is 13 feet, 6 inches.
   c. Maximum length of a truck-tractor and semi-trailer is 60 feet.
2. Trailers should be loaded properly to avoid spillage and protruding cane.
3. Truck drivers should be properly licensed.
4. Trucks and trailers should have liability insurance.
5. Trucks and trailers should bear inspection tags.
6. Special effort should be made to see that all trucks and trailers have the following equipment and that such equipment is kept in good condition and working order:
   a. Reflectors, lights, and directional signals as required by law.
   b. Mufflers.
   c. Mud flaps.

C. DURING EXCESSIVELY WET WEATHER WHEN ROADBEDS ARE SOFT, LOAD WEIGHTS SHOULD BE REDUCED TO PREVENT DAMAGE TO HIGHWAYS, AND SHOULDERS.

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THE LOUISIANA SUGARCANE VARIETY CENSUS FOR 1970

R. J. Matherne[1]

Every year a sugarcane variety census is taken in Louisiana because there is a constant change in the percentage of acreage planted to these varieties. The census is particularly interesting this year because important changes have occurred. The relative importance of a variety can change very rapidly in Louisiana due to the few stubble crops obtained from a planting.

The survey is made with the assistance of the County Agents[2] and the method used has been described in a previous publication (2). Results are found in Table 1. Since 1969 CP 52-68 dropped 7.95 per cent and CP 55-30 by 6.15 per cent. The new varieties, L 60-25 and CP 61-37 increased by 13.62 per cent and 6.56 per cent, respectively. CP 52-68 is down to 31.71 per cent and L 60-25 is up to 27.22 per cent of the acreage.

Figure 1 shows the changes over a 10-year period for three varieties.

Table 1. Results of the 1970 Sugarcane Variety Census in Louisiana

Variety	1 Southeastern	2 Southwestern	3 Northern	Louisiana (total)	Changes 1969-70
	percent	percent	percent	percent	percent
CP 52-68	21.16	48.33	25.11	31.71	— 7.95
L 60-25	31.80	20.34	29.35	27.22	+ 13.62
NCo 310	2.67	23.28	6.53	10.81	— 2.67
CP 48-103	16.00	0.54	15.89	10.37	+ 0.05
CP 61-37	12.73	3.91	8.80	8.85	+ 6.56
CP 55-30	10.27	1.01	4.46	5.91	— 6.15
CP 44-101	0.80	0.81	1.58	0.91	— 2.91
L 62-96	1.15	0.53	1.04	0.91	+ 0.91
Others	3.42	1.25	7.24	3.31	

[1]Southeastern area consists of the following parishes: Ascension, Lafourche, St. Charles, St. James, St. John, and Terrebonne.

[2]Southwestern area consists of the following parishes: Iberia, Lafayette, St. Mary, St. Martin, and Vermilion.

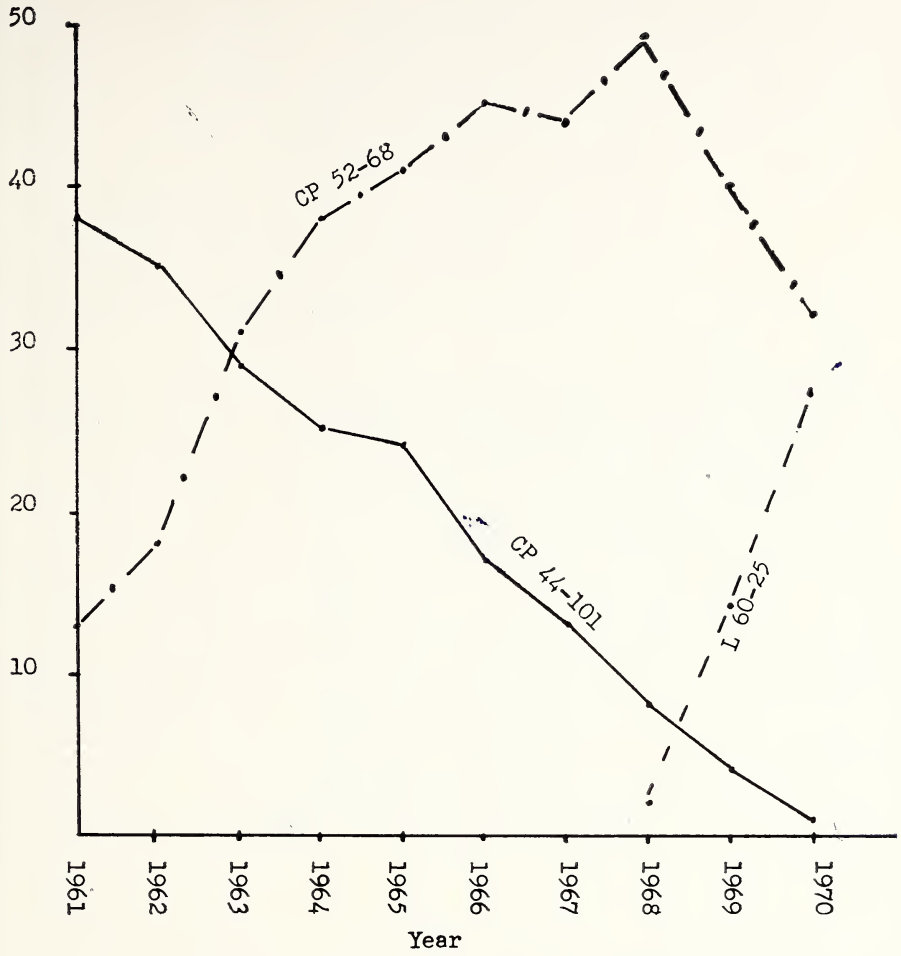
[3]Northern area consists of the following parishes: Avoyelles, Iberville, Pointe Coupee, Rapides, and West Baton Rouge.

Seldom does a variety remain as a major variety more than 10 years. CP 44-101 was an exception (1), but dropped very rapidly after 1961. It is practically nonexistent. CP 52-68 has been a major variety for 8 years. It reached a peak of 48.67 per cent in 1968, but dropped 16.96 per cent in 2 years. L 60-25 has risen very rapidly since its release in 1966.

[1]Research Agronomist, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture, Houma, Louisiana 70360.

[2]The author is indebted to the following County Agents who made the survey: C. J. Arceneaux, E. J. Burleigh, V. O. Calandro, Kermit J. Coulon, Sterling Deville, Conrad Gauthier, Minus Granger, Stephen Guilbeau, E. J. Lousteau, A. J. Melancon, C. A. Miller, Ben Simpson, Claude Songy, Richard Sonnier, H. A. Webb, and Murphy Veillon.

Figure 1. Changes in percentages of acreage for 3 Louisiana varieties over 10-year period (1961-1970).



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2. Matherne, Rouby J. 1969. The Louisiana Sugarcane Variety Census for 1969 and Suggestions for better use of varieties. Sugar Bull. 48: 51-53.

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION THE SUGAR BULLETIN

I hereby certify the following:

1. That the names and addresses of the publisher, editor, managing editor and business managers are: Publisher—The American Sugar Cane League of the U.S.A., Inc., New Orleans, La.: Editor—Gilbert J. Durbin, New Orleans, La.: Managing Editor—Glenn R. Timmons, New Orleans, La.: Business Manager—none

2. That the owner is the American Sugar Cane League of the U.S.A., Inc., New Orleans, La.—Thomas H. Allen, Franklin, La., President,—Ed Schexnayder, White Castle, La., 1st Vice-President,—F. A. Graugnard, Jr., St. James, La. Secretary—Warren J. Harang, Jr., Thibodaux, La., Treasurer

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are none.

4. The average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the 12 months preceeding the date shown above was 4,566.

GLENN R. TIMMONS
Managing Editor

IN THE FIELD

(Continued from page 316)

lodge but not enough is known about them to say how much. With the 1966 sereis unreleased varieties there is just not enough information or exposure to know whether or not these canes will lodge and to what degree.

Cane growers are urged, and encouraged, to continue planting L.60-25, C.P.61-37, and C.P.48-103 where that variety is adapted this planting season. Costs are very important but profits are necessary. More tons of cane per acre usually means more profits.

NOTICE

Mr. Eugene D. Kelly, Acting State Executive Director of the A.S.C.S., announced that USDA Sugar Division personnel will conduct the meetings shown below. The purposes of the meetings will be (1) to review the cane sampling, testing, and reporting procedures with factory personnel and (2) to have a general discussion of the Sugar Act. Mr. Kelly says that both growers and processors are invited to these meetings, which are scheduled as follows: New Iberia at the Recreational Center (adjacent to the Sugar Cane Festival Building), Parkview Drive, 9:30 a.m., Thursday, October 1; Houma at the Municipal Auditorium, 880 Varret Street, 9:30 a.m., Friday, October 2.

IN WASHINGTON

(Continued from page 315)

were now farm workers. They organized themselves in the same way as industrial workers in order to bargain for good wages and working conditions. With so few farms in the local community, there was no longer any place for the machinery dealer . . . the feed dealer . . . the merchant dealing in supplies of all kinds for farmer customers.

ALL OF THIS WAS IN THE NAME OF PROGRESS. Because agriculture was controlled by so few, production could be balanced against needs and prices set as the owners desired. The government was now out of agriculture. The public soon realized that a small group had a strangle-hold on the nation's food supply, so the public had the food industry declared a public utility. The food industry was regulated by the public and the public had to permit a reasonable return to stockholders with the result that food prices continued to rise and the nation could not be as confident of abundance as it had in the past. A fantasy, but . . . could it happen here?

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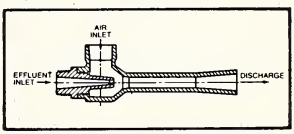

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